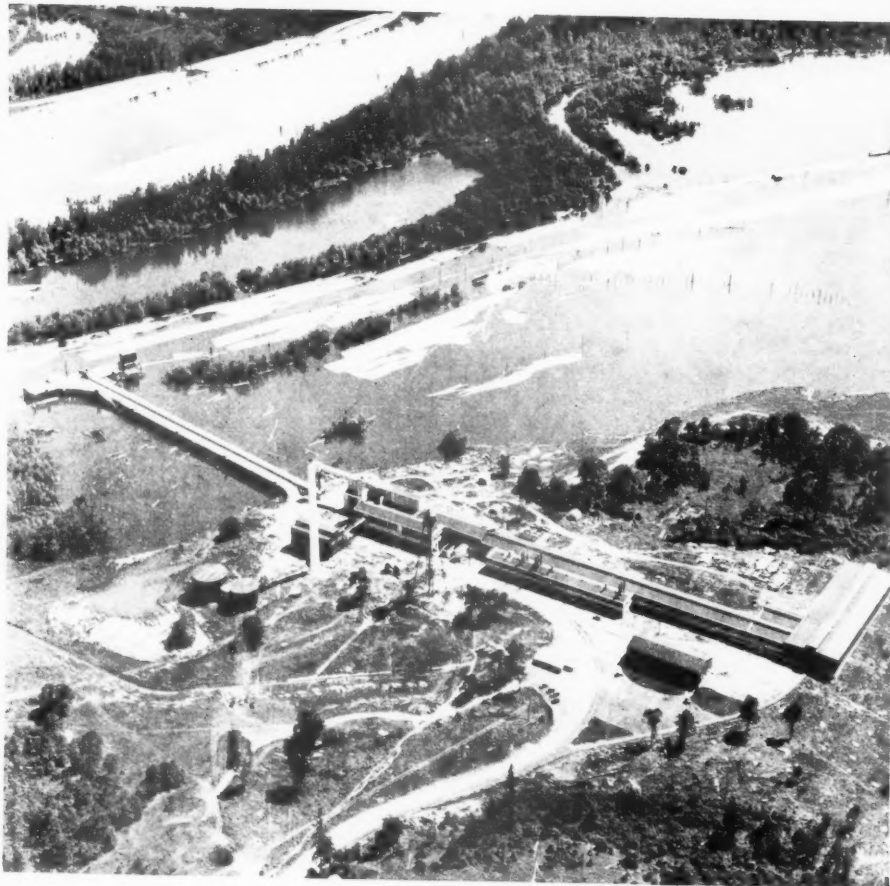


PACIFIC PULP & PAPER INDUSTRY

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Number 3

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The New Fir-Tex Plant at St. Helens

Bruhaker Aerial Photo, Portland

JULY + 1930

Liquid CHLORINE



*Ideally Located to
Render Most
Efficient Service*

For 80 years, since its founding in 1850, the PENNSYLVANIA SALT MANUFACTURING COMPANY has served the pulp and paper industry with chemicals of high quality. As one of the pioneer producers of Liquid Chlorine, PENN SALT has long been one of the industry's chief sources of dependable supply.

With the expansion Westward of pulp and paper making, it was a natural step for the company to extend its chemical service to embrace the Pacific Coast industry. Construction of a modern electrochemical plant at Tacoma, Washington, was completed in 1929, and from this advantageous location Liquid Chlorine is immediately available to the West Coast's pulp and paper industry.

TACOMA ELECTROCHEMICAL CO. TACOMA WASHINGTON.

A SUBSIDIARY OF THE PENNSYLVANIA SALT MANUFACTURING CO.

Pacific Pulp & Paper Industry is published once a month—except in March, when publication is semi-monthly—at 71 Columbia St., Seattle, Wash. Subscription: U. S. and Canada, \$4.00; other countries, \$5.00. Entered as second class matter May 20, 1927, at the Postoffice at Seattle, under the Act of March 3, 1879.

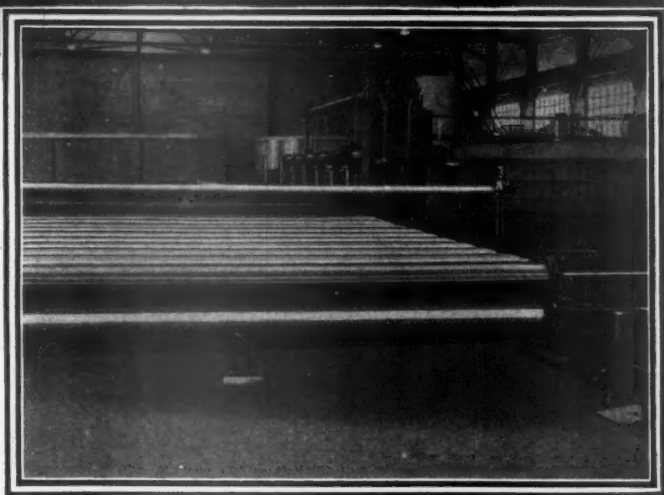
Wherever Paper is Made

THE REMOVABLE MAKES IT

THIS map of the North American continent shows that the *Beloit Removable Fourdrinier* has proved tremendously popular with papermakers regardless of locality.

Almost every known grade of paper is made in the fifty-seven mills and eighty-eight machines that comprise the *Beloit Removable* honor roll.

If your name is not among those present, it will pay you to learn the reason why practically every new installation specifies the *Removable*.



Showing Fourdrinier Part Rolled Out by Power as a Complete Unit

BELOIT IRON WORKS, BELOIT, WIS., U. S. A.

Originators of the High-Speed Shake and Removable Fourdrinier



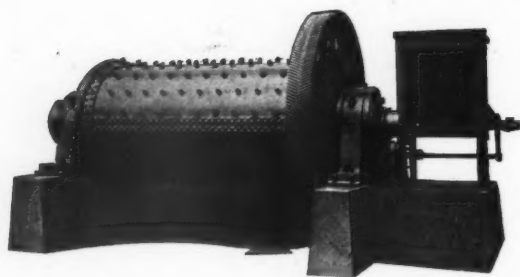
The BELOIT



*Installation
of five 6'x 12'
Rod Mills
grinding
chestnut
chips.*



Utilize Wood Waste *for* Profits *by* Rod Milling



A-C Products for the Paper Mill

Rod Mills
Electric Motors
Centrifugal Pumps
Texrope Drives
Power Transmission Machinery
Perforated Metals
Thorne Barkers
Power Plant Equipment:
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 Steam Engines — Condensers

EVERY paper mill has a certain percentage of waste material which can be profitably converted to paper stock by means of rod mills.

MANY types of liner and insulating board are being manufactured today from refuse which was previously discarded or used as fuel.

ONE of the outstanding achievements in recent years is the development of a corrugated board manufactured from chestnut wood after the by-products have been extracted.

SEVERAL installations each consisting of 5 - 6x12 direct connected rod mills are converting waste chestnut wood at the rate of 15 tons in 24 hours per mill into a high grade corrugated board at a very low cost per ton.

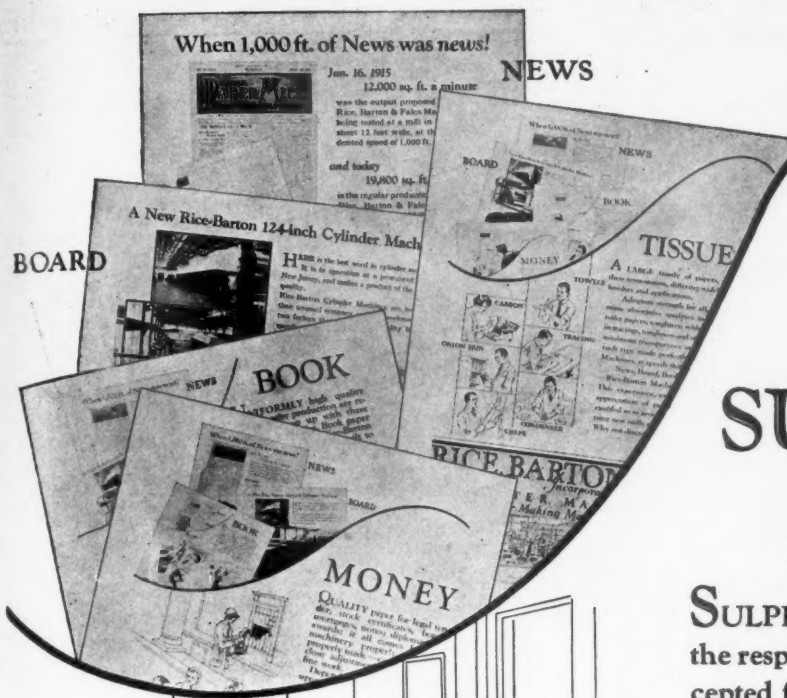
ROD mills can also be used successfully for beating or refining slush stock producing a superior grade of paper by this new method at very low cost.

WE believe it will be worth your while to investigate the results obtained with Allis-Chalmers rod mills. All inquiries given careful attention.

ALLIS-CHALMERS

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SULPHITE BONDS

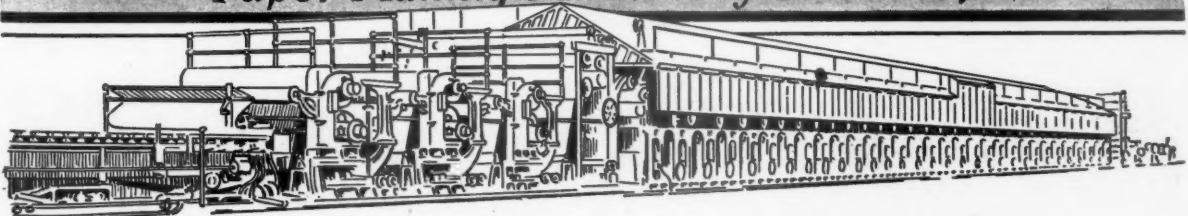
SULPHITE BONDS have obtained the respect of the business world. Accepted for their true worth, as good sheets—no longer regarded as masqueraders.

They are good sheets, due to careful preparation, skillful manufacture, and dependable Rice-Barton machines that turn them out at profitable speeds.

Naturally, we would like to sell you a new machine; but we will gladly give you our conscientious opinion regarding your present equipment. Perhaps a little rebuilding will suffice to meet faster production schedules.



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Incorporated
WORCESTER, MASSACHUSETTS
Paper Making Machinery Since 1837



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ANOTHER MANUFACTURER IN THE PAPER INDUSTRY THAT USES **SKF** BEARINGS

VALLEY IRON WORKS CO.

Equipped with the
highest priced
Bearing in the World



QUALITY VS. PRICE... TIME TELLS THE STORY AND VALLEY PREFERS TO USE **SKF**

"**Q**UANTITY is remembered long after Price is forgotten," says the Valley Iron Works Co. in featuring the Valley-Thune Rotary Screen. And the same may be said of the **SKF** Bearings which are an important factor in keeping this machine to the peak of efficiency. Performance is the basis on which Valley has been buying **SKF** for years... not price. **SKF** Bearings make quiet, easy running equipment. They show hardly a

trace of wear year after year and require no adjustments. This means longer life for all parts and low maintenance. Sealed housings keep out water and lubricant in... very vital factors in helping to produce clean pulp. Time tells the story about the real value of **SKF**. You can't judge bearings by a few months or a years' service. That's why 47 manufacturers of paper machinery prefer **SKF**... the highest priced bearing in the world.

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San Francisco

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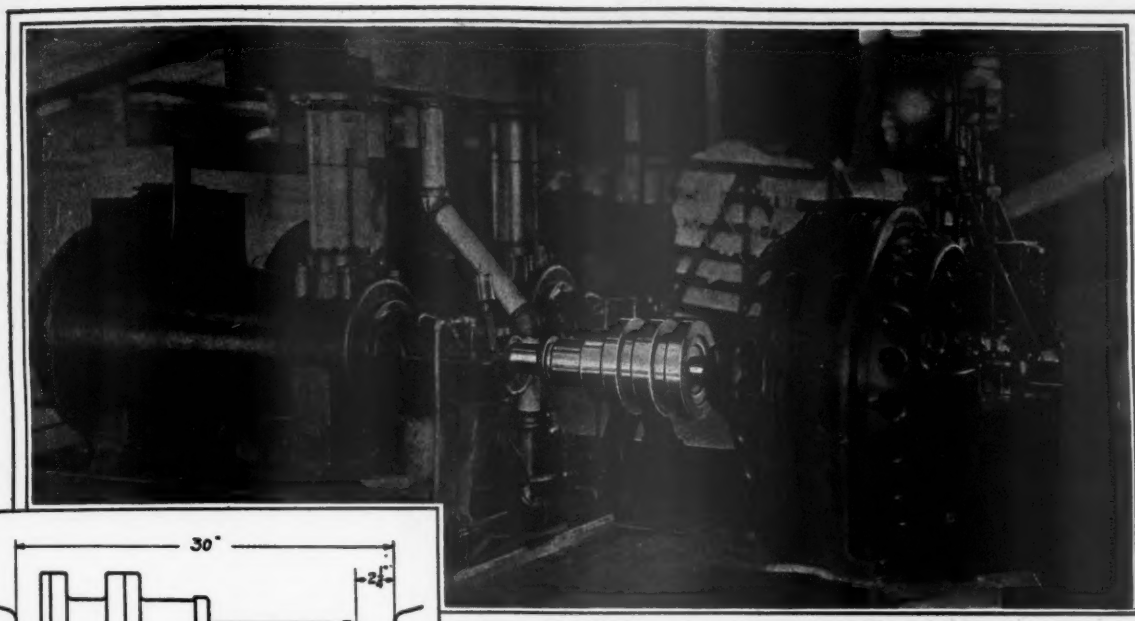
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EQUIPPED WITH THE HIGHEST PRICED BEARING IN THE WORLD

Means just this

SKF
Ball and Roller Bearings

That the manufacturers whose product is illustrated above preferred to pay more for their bearings and less for servicing or replacing them. They preferred to pay a higher price in the beginning than many times this higher price in the end. And, finally, they preferred to economize by using **SKF** bearings because they are made to do their job, not to fit a price list.



Fast's Jordan Coupling, Westfield River Paper Co., Russell, Mass.

How FAST'S Jordan Coupling Works

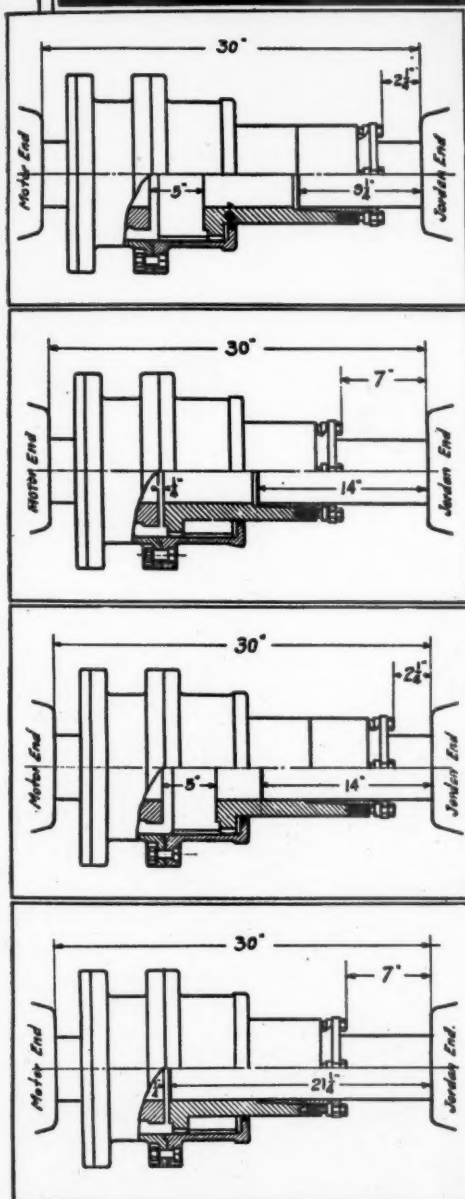
BY use of Fast's principle of Mechanical Flexibility, not only are shut-downs for coupling repairs eliminated, but adjusting the jordan plug is simple, providing a full 12-inch adjustment on a 5-inch coupling.

To start with, it has no flexible lacings, bushings, springs or other flexible materials. Instead a new mechanical principle is used which eliminates the necessity for ever shutting down for coupling repairs.

Note the drawings of a Fast's Coupling on a 5-inch jordan shaft. Diagram 1 shows the position when the jordan lining is new, ready for a $4\frac{3}{4}$ -inch adjustment of the plug, to position shown in diagram 2.

Now, by simply releasing four draw bolts the entire jordan end of the coupling is set up toward the jordan, and you are ready for another $4\frac{3}{4}$ -inch travel, diagram 3. Then again this can be done, until the jordan plug has been adjusted through full 12 inches, see diagram 4.

Do not fail to send for the free pamphlet, "Solving Coupling Problems in Paper Mills". It explains this jordan coupling in full, as well as other Fast's Couplings for every coupling problem of the pulp and paper industry.



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The Bartlett Hayward Company
227 Scott Street - Baltimore, Md.

Please send me the free pamphlet on "Solving Coupling Problems in Paper Mills".

Name

Name of Mill

Address



Peck Carrier



SS-850 Chain for suspending and operating barking drums

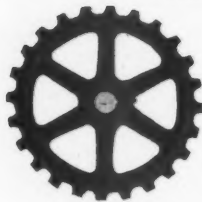
'C' Class Combination Chain

'400' Class Chain

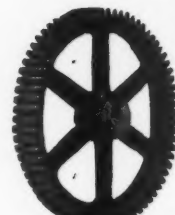
'RC' Class Chain for power transmission



Belt Conveyor



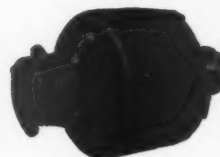
FLINT-RIM Sprocket



Gears of all kinds



'S' Spur attachment



Friction Clutch



Plain Bearing



Channel-top sorting-table conveyor, for handling logs from barking drums



Malleable Iron Safety Collar



HEXTOP Grease Cup



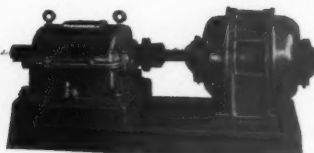
Style "DS" Take-up



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Link-Belt Silent Chain Drive



Link-Belt Herringbone Speed Reducer (Sykes tooth form)



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Everything for Handling Materials, and Driving Machinery

EVERY mill should use the new 1088-page Link-Belt General Pricelist Catalog 500, which completely covers in list prices and descriptions, the machinery equipment to keep the mill going. Address the nearest office listed below.

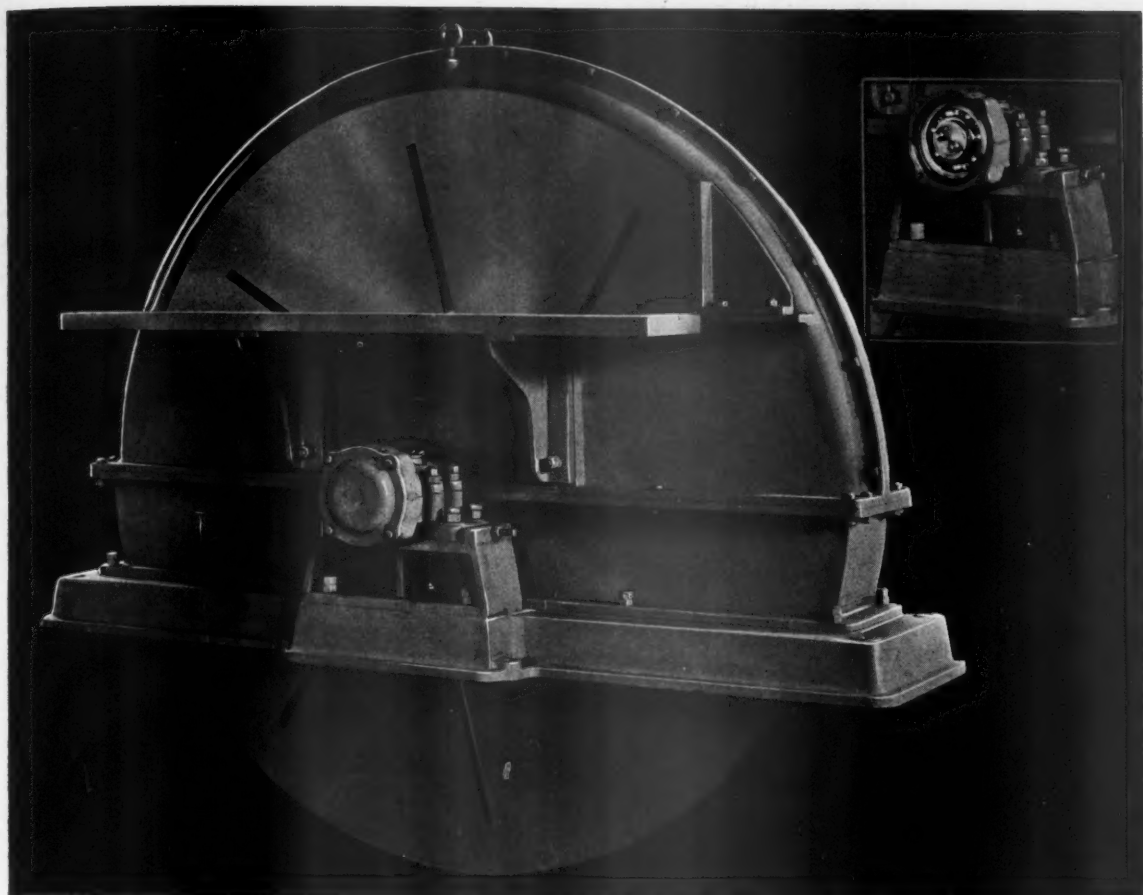
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Equipment for Handling Materials Mechanically and for the Positive Transmission of Power. CHICAGO, 300 West Pershing Road INDIANAPOLIS, 200 South Belmont Avenue PHILADELPHIA, 2045 West Hunting Park Avenue

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and with a batch-blending system
insures maximum uniformity of
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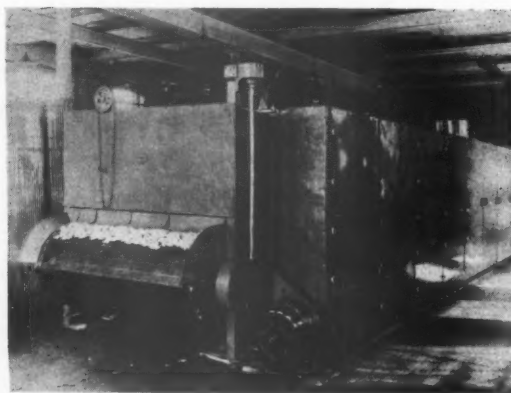
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THE Fidalgo method of drying pulp will not in any way affect the quality or test of the pulp; its strength factor is practically the same as wet pulp, and its beating time is considerably less.

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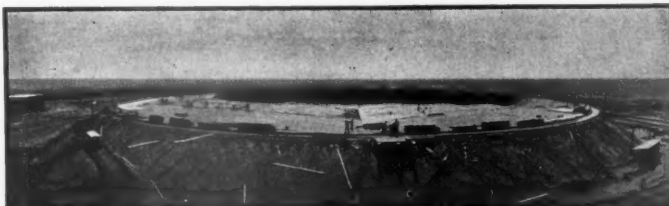
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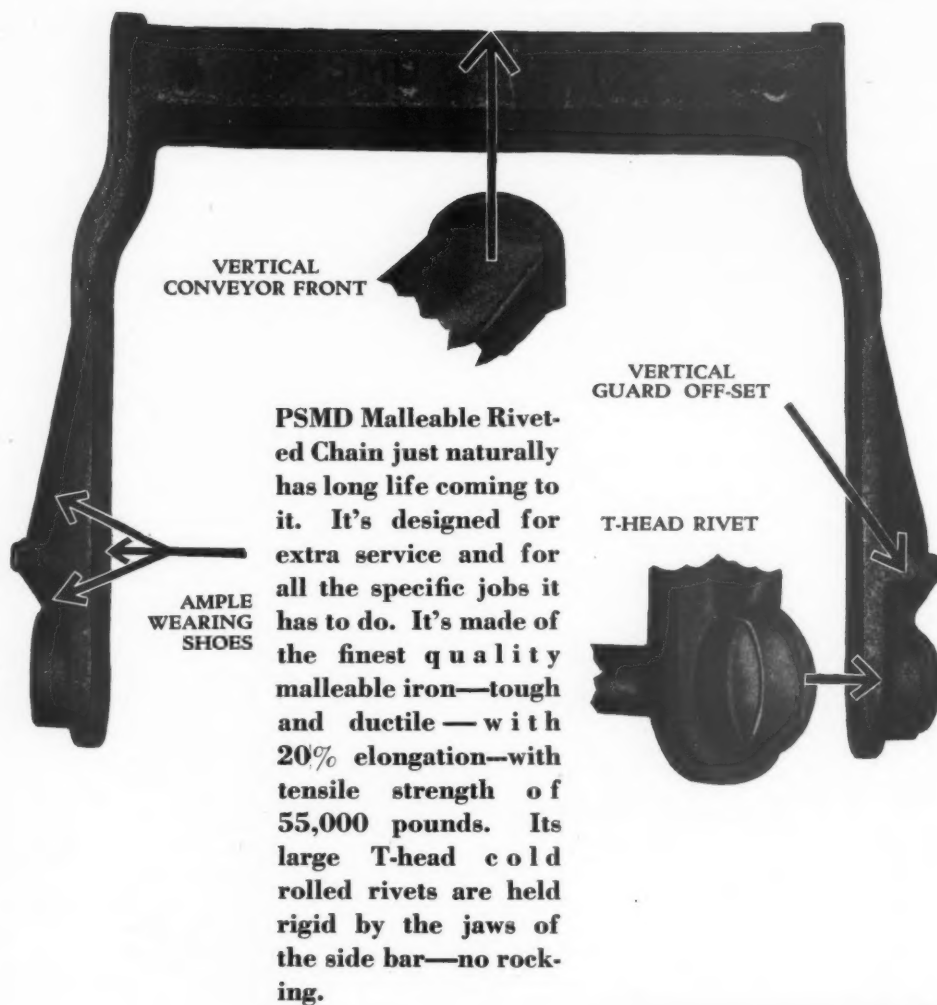


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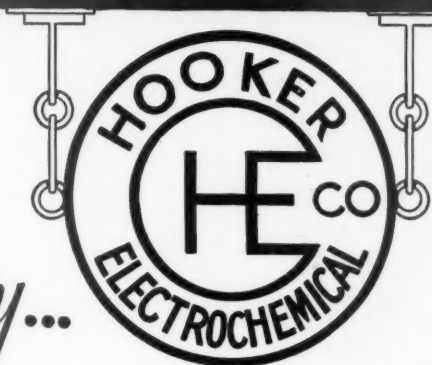
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Benzoyl Chloride
Benzyl Alcohol
Antimony Trichloride
Ferric Chloride
Sulphur Monochloride
Sulphur Dichloride
Sulphuryl Chloride
Salt

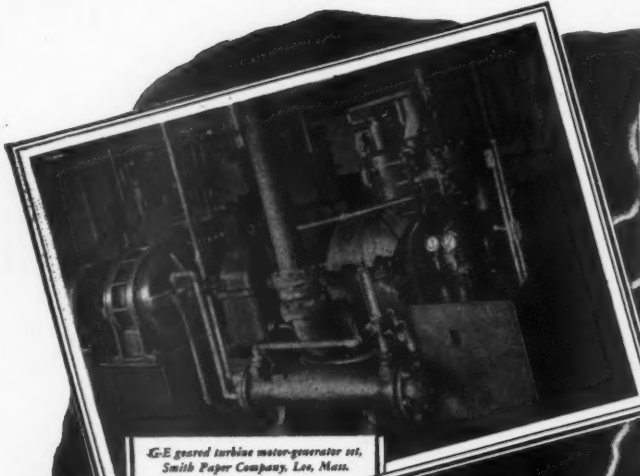
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Sales Office—Tacoma, Washington

EASTERN

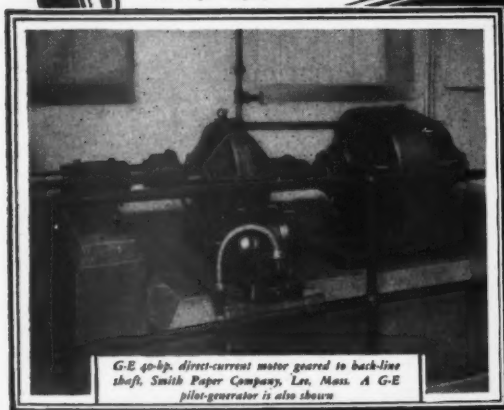
Plant—Niagara Falls, N. Y.
Sales Office—60 East 42nd St., New York City



G-E geared turbine motor-generator set,
Smith Paper Company, Lee, Mass.



G-E rewinder drive and control for Fourdrinier paper
machine, Smith Paper Company, Lee, Mass.



G-E 40-hp. direct-current motor geared to back-line
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pilot-generator is also shown

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A new General Electric development— a dual drive consisting of a mechanical-drive turbine and a synchronous motor makes this possible.

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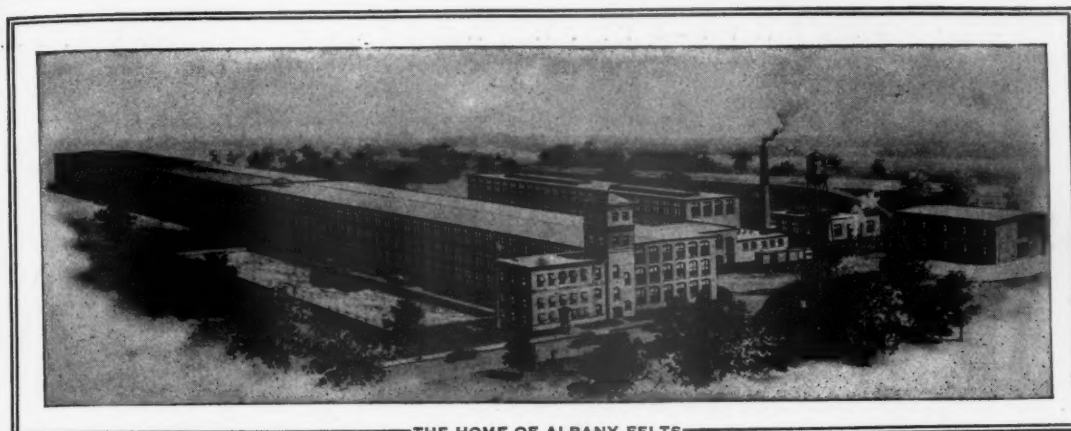


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... WHY IS IT POSSIBLE
for Albany to produce BETTER and BETTER
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**Constantly
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Tailor-made
from the World's
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Albany NEVER LETS UP—
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methods. That is why ALBANY FELTS
are leaders in their field, steadily grow-
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**Constantly
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From handwheel to disc, this valve promises years of service

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The special Cranite disc with which the No. 380 E globe and 381 E angle brass union bonnet valves are equipped makes them unusually efficient in controlling steam working pressures up to 300 pounds at 500 degrees, as well as air, gas, oil, and water. For this disc, made in standard dimensions, is of special asbestos composition. Years of experiment and service have proved it capable of keeping the valve tight under the most rigorous conditions.

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No. 380 E Brass union bonnet globe valve

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Heavily built and correctly proportioned, these valves promise years of service under the most arduous conditions . . . and live up to them!

Complete information is given in circular No. 220; write for it.

Valves



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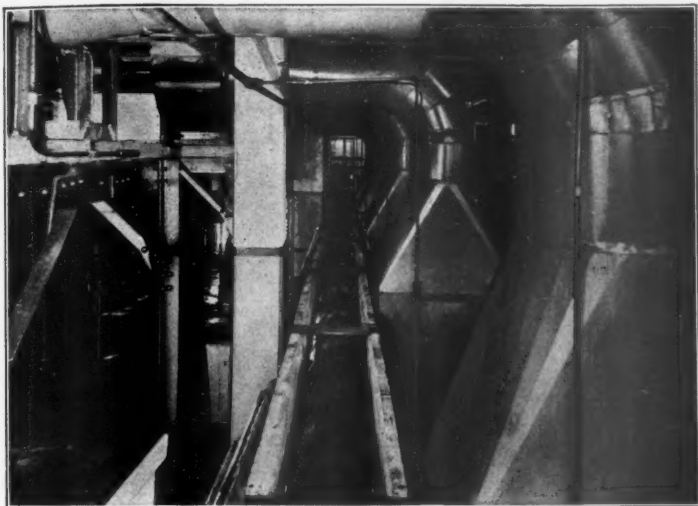


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Screw Conveyor for Handling Wet Pulp

HANDLING Pulp and Paper Economically

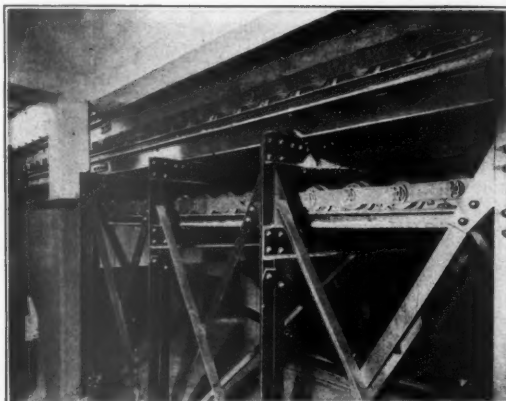
Wherever material is to be conveyed in the pulp or paper mill there is a

WEBSTER-BRINKLEY

system that will do the job right.

Screw conveyors for handling wet pulp, apron conveyors for handling chips or hogged fuel, or gravity discharge elevator conveyors for combining the conveying and dumping of materials, have all been engineered and installed by our organization in Pacific Coast mills.

Our Engineering Department has acquired a fund of valuable knowledge through years of practical experience in solving conveying problems. This experience will gladly be applied to your own particular problems.



Apron Conveyor with Structural Steel Frame, Handling Wood Chips from Box Cars to Storage Bins

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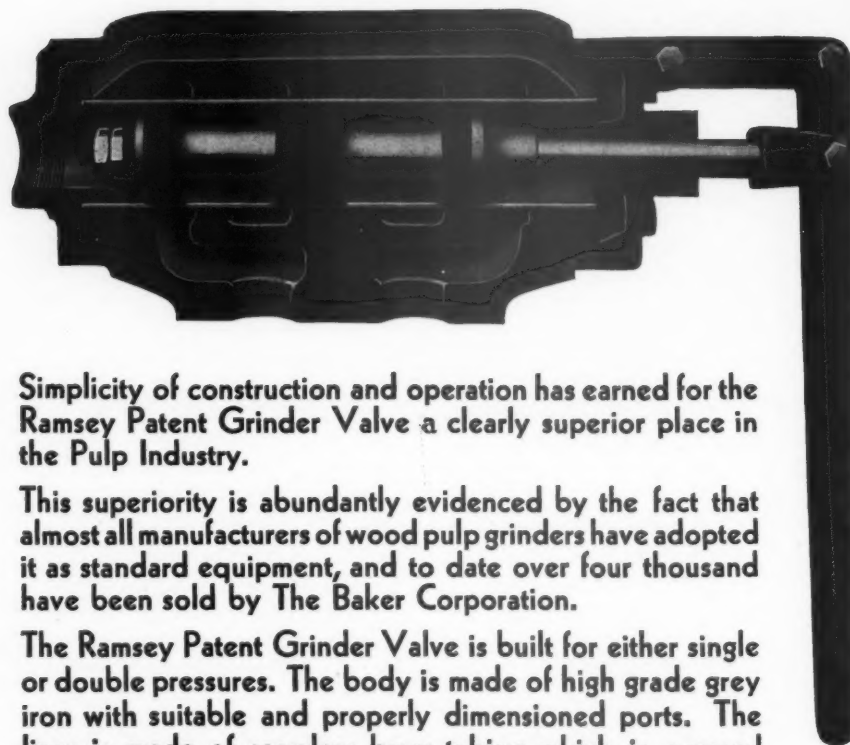
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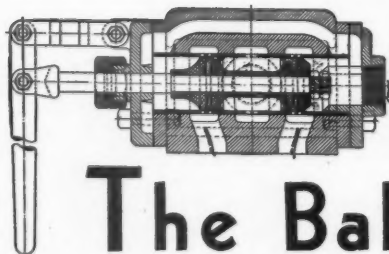
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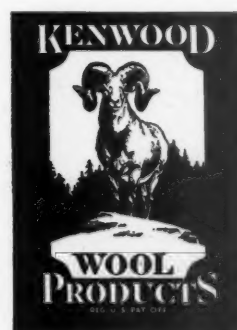
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THE PACIFIC COAST JOURNAL FOR PRODUCERS, CONVERTERS, AND DISTRIBUTORS OF PULP, PAPER, AND BOARD.

SEATTLE
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Sherlock Building

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369 Pine Street

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Douglas Building

¶ Many serious minded lumbermen, loggers, timber owners, bankers and industrial entrepreneurs are asking themselves if the wood-using industries as a whole are not on the doorstep of a new era.

¶ There are many bits of evidence to indicate that the tree as it stands in the forest is now being assayed by means of a new set of values.

¶ These values have always existed. The tree remains unchanged. But the methods of capitalizing those values are being discovered. No longer is the tree just so many logs containing so many board feet of lumber.

¶ The consumption of wood as lumber has declined from 46 billion board feet in 1907 to a present annual demand of about 34 billion board feet. Lumber is a forest product retaining its original mechanical structure, but it is meeting many competitors these days.

¶ Yet the total consumption of forest products in no way reflects the decline in lumber consumption. Wood in the raw state is in increasing demand, but it is entering into the manufacture of new products which care nothing about the mechanical structure of a tree. Every year millions of cords of wood are converted into paper, rayon, lacquer, insulating materials.

¶ These manifold new products care only about the fibre content of the tree, or, carrying the division still further, are interested only in the chemical make-up of the fibre itself.

¶ On the Pacific Coast we are fast approaching the day of complete wood utilization, which is synonymous with efficiency in the wood-using industries. The new plant of the Fir-Tex Insulating Board Company, described in this issue, is a step in the desired direction.

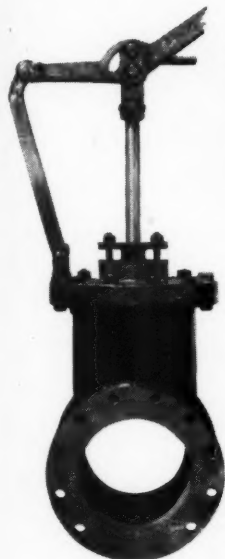
¶ Metals do not replenish themselves. Wood does—with a little encouragement from man. Wood is taking on new values. Reforestation will guarantee continuance of these values.

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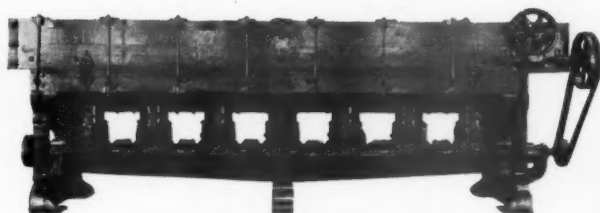
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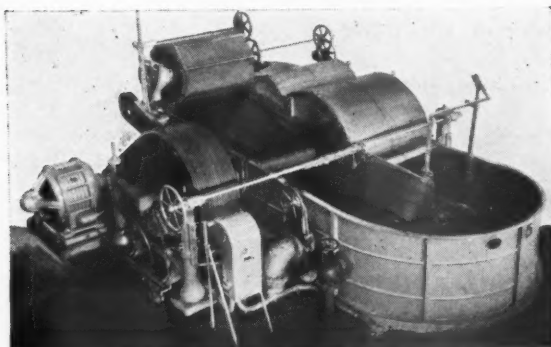
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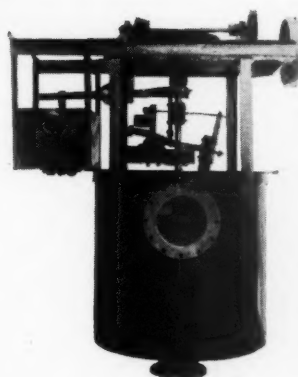


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Shown is some of the first wood, coming from the sawmill and cut-up plant at the right, moving up the two steel belt conveyors to the chipping plant of the Puget Sound Pulp & Timber Company's new sulphite mill.

Puget Sound Pulp & Timber Company BEGINS PRODUCTION

in new 175-ton bleached sulphite pulp mill
at Everett, Washington

COMPLETING an era of construction that gratifyingly exceeded original anticipation the Puget Sound Pulp & Timber Company last month entered upon a new chapter of its industrial venture when it began pulp production in its modern 175-ton high grade bleached sulphite pulp mill. What had been a barren site on the industrial waterfront of Everett, Washington, has been transformed in approximately nine months into a going concern, one of the latest and finest assets of the growing pulp and paper industry of the Pacific Coast. The completed mill represents an investment of approximately \$4,000,000.

The sawmill cut-up plant, departing radically from the usual Pacific Coast sawmill layout, broke down its first log on June 12. Pulp production began about one week later and on June 28 the first finished pulp was put across the drying machines. Altho first production was centered on production of unbleached sulphite, the bleach plant construction and installation are completed and first operations in this department will begin during the current month.

Perhaps in the installation of the two fourdrinier drying machines more speed was displayed than in any other part of the mill. These two machines, coming all the way from Sweden, seemed to arise over night. Bed plates, gears and some other parts arrived in an early shipment and everything was in readiness when the main part of the consignment was unloaded the last day of May. The two 152-inch machines at this writing have been entirely assembled.

Constructed of first class materials thruout the finished mill presents an excellent external appearance in addition to housing the latest in equipment. The

outer yard has been cleaned up and will be landscaped later. Steel, concrete, brick and glass have been employed in all of the buildings except the sawmill, where wood construction is used.

The completed mill has its own deep water dock with rail spur, providing transcontinental and ocean shipping facilities. The dock has been designed to handle cargoes in both directions with greatest facility.

The sawmill, departing from the ordinary, has been designed specifically for cutting up logs for pulp chips. The aim is to make as few cuts in the log as possible. The bulk of the log goes to two 110-inch KMW chippers in the form of cants of large dimension. Two to four of these cants are cut out of the average 20-inch log with three or more cuts of the band saw. Round edges are taken off in an edger and a slasher reduces to four and five foot lengths. The edgings travel another conveyor to be barked before going to two 83-inch chippers. The result is a minimum of loss in saw kerf and chips of high cleanliness and uniformity.

The chipping plant and chip screen room is a substantial permanent building of brick, steel and concrete. Refined chips travel a long inclined conveyor belt of rubber to chip storage over the digesters. Sawdust joins the hogged fuel conveyor coming from the sawmill.

In designing the digester building the fundamental idea was to supply sufficient capacity to permit slow cooks. There are five digesters 17 x 56 feet in size.

The cooked stock is collected in a large blending tank which serves a purpose of keeping the mill product uniform. In the screen room there is a vast expanse of flat screens. This department holds a key position in

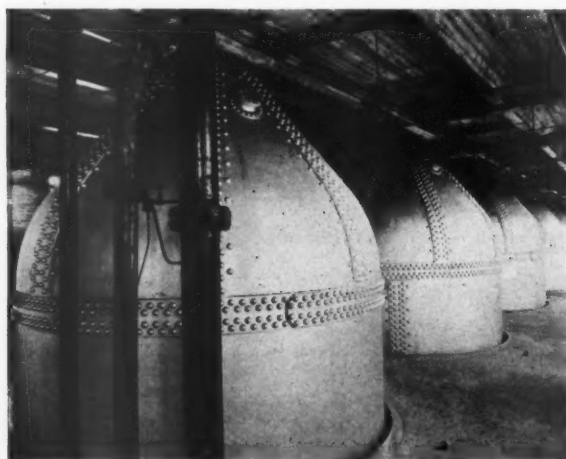
the plant, for its function is to do a most thoro job in refining and washing the pulp.

The bleach plant is sufficiently large to take care of the plant at capacity production. Design of this department was in the hands of the Pulp Bleaching Corporation.

The present plant has two fourdrinier pulp drying machines. These are installed in a single machine room and adjoin a building of similar size which is presently

project was announced. In June the site option was taken up, on August 28 the preliminary contracts for dock, dredging, filling and grading were let. The main contracts were let in September. In June, 1930 pulp production began.

Concurrently with the mill construction the City of Everett constructed a \$2,000,000 industrial water line to supply the new industry. The line was completed on July 1.



An unusual view of the Puget Sound Pulp & Timber Company's five digesters taken from the level beneath the charging floor.

being used for a pulp warehouse, but which has been designed to accommodate two more machines if expansion is undertaken later.

It was the aim of President Ossian Anderson in building the new mill at Everett to construct the highest type of plant to make the finest product. Hardy S. Ferguson was retained as the engineer to design and supervise construction. The actual work was carried forward under the direction of J. F. McCarthy as resident engineer for Mr. Ferguson.

The completed mill combines the years of pulp and paper mill engineering experience of Mr. Ferguson and his associates with the practical experience acquired by Mr. Anderson who pioneered the pulp industry in Washington with the building of two other sulphite mills—at Anacortes and Bellingham—which are now units of the Puget Sound Pulp & Timber Company.

Everett, Washington, long prominent as one of the most important lumbering centers on the Pacific Coast, draws from a log basin which, due to low cost towing, may be said to encompass all of the Puget Sound region. The Everett mill will use only logs fresh from the forest, cut up and chipped under its own supervision. Every operation in the whole process from breaking down the log, thru chipping, chip screening, cooking, refining and drying will be closely checked to insure uniformity and high quality of product. The layout of the mill in "U" form has been aimed at efficient routing of materials thru the manufacturing process.

As an illustration of how things have happened at Everett it is interesting to review dates. In February 1929 negotiations were opened with the city of Everett for industrial water supply. At that time the Puget Sound Pulp & Timber Company was not in existence nor were the interests behind the water supply request publicly known. By March 10 an agreement had been reached on the water question. Two weeks later the

Seek Greater Use of Hemlock for News

The University of British Columbia is carrying on important experiments, sponsored by the Powell River Company, with a view to finding a means of utilizing a higher percentage of hemlock in the manufacture of newsprint. The Powell River Company last year placed \$5,000 at the disposal of the university, and most of this was expended on work aimed at the elimination of discoloration. This year a similar amount was given to the university and greater stress is being placed on the hemlock utilization factor.

Newsprint manufacturers in British Columbia are of the opinion that new development is likely to be curtailed until such time as it is possible to use more hemlock in manufacturing processes. At present about 40% Sitka spruce, 40% Western hemlock and 20% larch and balsam are the constituents of British Columbia newsprins.

The percentage of Sitka spruce is regarded as too high for economical operation over an indefinite period, as the spruce resources are not nearly as great as of some other species, hemlock for instance. Douglas fir has been used to some extent in the manufacture of kraft and other heavy wrapping papers, and in book paper, but it is not now considered that this wood will ever be of much value in newsprint making. In any event, Douglas fir, it is believed, would always be too



The new mill at Everett has an expansive dock and unexcelled facilities for shipping both by land and water.

valuable for structural and other purposes to permit of extensive use in pulp mills except perhaps in the use of sawmill waste.

Western hemlock, of which there are enormous stands in British Columbia, is regarded as the possible salvation of the newsprint industry of the future.

Until such time as this way is found practical newsprint men are skeptical of announcements of new big-scale newsprint developments in areas outside the spruce belt. Powell River Company and Pacific Mills, Ltd., the two big newsprint operators in British Columbia, are well supplied with spruce, but outside the holdings of these two corporations the timber of that species in the readily accessible areas is said to be limited.

Construction of

Paper Mills in Alaska

May Be Started in 1930

Cameron and Zellerbach interests apply for final permits to construct two 80,000 horsepower hydro-electric projects

PROSPECTS for the certain and early development of two major pulp and paper mill projects in South-eastern Alaska involving a total expenditure of from \$40,000,000 to \$50,000,000 took a decided turn upward last month when applications were filed at the eleventh hour with the Federal Power Commission for permission to undertake two separate hydro-electric power developments which would supply necessary power to paper mills.

George T. Cameron, publisher of the San Francisco Chronicle, made application for final license to develop Long and Crater Lakes at Speel River, and Lake Dorothy near Taku Inlet, into a project which would provide 81,000 h.p. to be used in the operation of a pulp and paper mill on Gastineau Channel, near Juneau. The final site of the proposed paper mill was not named.

I. Zellerbach and J. D. Zellerbach, president and executive vice-president respectively of the \$100,000,000 Crown Zellerbach Corporation, internationally known paper manufacturers and distributors, at the same time applied for final license for a similar project in the Ketchikan area which would develop 80,000 h.p. The Zellerbach enterprise contemplates the erection of five power houses which would be inter-linked in one system to supply a paper mill in the vicinity of Ketchikan. The application seeks permission to build dams at six lakes, Mirror, Ella, Swan, Grave, Orchard and Manzanita.

Time Extended

When the federal government advertised for bids in 1927 the Cameron and the Zellerbach groups were successful because of the relatively high figure they offered on the Western hemlock stumpage, which comprises the bulk of the Alaska panhandle forests. Under joint preliminary permits issued in that year by the Federal Power Commission and the U. S. Forest Service the Cameron and Zellerbach groups at once began field surveys. These surveys were carried out jointly by the two permittees, two field parties being employed, one to study forest stands, the other concerning itself with power projects.

The first permits granted a two-year period for this preliminary investigation, and held the provision that a paper mill of not less than 200 tons daily capacity was to begin production within five years, that is, by 1932. The two-year investigational period ending June, 1929, was extended for another year, expiring June 16, 1930. The applications for final permits for hydro-electric developments were filed in the last hours of the extension period.

In the Juneau district the Cameron interests anticipate the expenditure of approximately \$4,000,000 for the power development alone. The Zellerbach power

project, which will tie together a number of scattered lakes on Revillagigedo Island, will require an investment of a similar figure, it is believed.

The ultimate investment in each plant will reach a figure of at least \$25,000,000 it has been estimated. Under the preliminary agreement with the Federal government the original 200-ton mill unit must be expanded in the course of years, but even without such an agreement the laws of economics would undoubtedly dictate large scale development.

Consequently, the industry as a whole apparently has taken the viewpoint that when Alaska's forest wealth is exploited it will be done in a big way. With the application made for final permits, it seems that that day of exploitation has now dawned.

Under the permits so far granted the Federal Power Commission and the U. S. Forest Service have labored in accord with a view to building up Alaska industrially. The power and the timber concessions, therefore, have gone hand in hand, the issue of each being dependent upon one permittee holding both timber and power rights.

Final Report

With applications for final permits in, the next step is an investigational check by the government. This move was taken at once and J. C. Dort, hydro-electric engineer for the U. S. Geological Survey, was promptly despatched to Alaska from Washington, D. C. He arrived at Ketchikan on July 3 and with B. F. Heintzle-mann, assistant regional forester in Alaska's Tongass National Forest, immediately began a field investigation of the Zellerbach and Cameron projects in the order named.

The field investigation is being carried out in part by airplane and will occupy three to six weeks. Following the investigation a complete report will be given to the Federal Power Commission at Washington for their study before the final license is issued. This report is expected to rest for final decision by midsummer.

Prospects seem favorable that final permits will be given and it is possible that first construction will be undertaken within the current year.

Camas Mill Seeks River Improvements

The Crown Willamette Paper Company has applied for federal permission to construct a dike across Camas slough to stop the flow of the Columbia River thru this area and make it still water. The company's largest and most diversified mill is located on this body of water at Camas, Washington. The dike would provide still water for log storage and in other ways facilitate the company's operations.

The Story of...

FIR-TEX



ST. HELENS, Oregon, thirty miles below Portland down the broad bosom of the Columbia river, situated in the heart of the vast timber empire tributary to that mighty stream, this month blossoms full blown into a wood-using industrial center unique on the Pacific Coast in point of diversification of product and complete utilization of forest resources. The latest addition to the St. Helens industrial family is the Fir-Tex Insulating Board Company which has just begun production in a mammoth new plant completed at a cost of \$1,500,000. The new company is manufacturing an insulating board called Fir-Tex, a product made from the whole waste of Douglas fir sawmills, bark and all. Its manufacturing process goes one step nearer that ideal where the full values of the forest are converted into commercial values.

Back in 1926 A. E. Millington, with his son, C. A. Millington, withdrew to a quiet retreat in California, and began a study of forest wastes. After more than two years of study the Millingtons had satisfied themselves that they had a product and a method of making that product which was commercially feasible.

At that time the scene shifted to Portland. The elder Millington has been connected with a number of major institutions manufacturing pulp, paper and insulating board. In his 35 years of experience in the field, the organizations he checks on his record are such as the Celotex Company, manufacturers of insulation board from sugar cane bagasse, the Spanish River Pulp & Paper Company at Espanola and Sault Ste. Marie, the Southern Paper Company at Moss Point, Mississippi, the Waterway Products Company at Chicago, and the Backus-controlled plants of the Minnesota & Ontario Paper Company and the Ontario Paper Company on the Canadian border at International Falls, Minnesota. This list does not exhaust the Millington travels.

Incorporated May, 1928

At Portland the Millingtons sought out interested capital and began to build an organization. Tom G. Taylor, who has figured in the financing of a number of pulp and paper mill enterprises in the Pacific Northwest, came into the picture about this time and jointly with the Millingtons interested a number of leading figures in Pacific Coast industrial life in the Fir-Tex enterprise. In May, 1928, the Fir-Tex Insulating Board Company was incorporated in the State of Oregon, with an authorized capital stock of 50,000 shares, divided equally into Class A shares of \$100 par value and Class B shares of no par.

A NEW PACIFIC COAST Wood-Using Industry

*Another stride has been made
toward the goal of complete
wood utilization.*

Offices were established in Portland and the plans began to develop for a mill with a daily capacity of 250,000 square feet of board to be erected on a site that had been previously selected near St. Helens. The site includes 175 acres about two miles from the business district of St. Helens. There is a rocky outcrop at this location which has been a considerable help in construction as very little piling or other foundation work has been necessary. The site has 2,700 feet of waterfront on a body of water tributary to the Columbia river, capable of accommodating barges and light water traffic. Deep water vessels call regularly at St. Helens. A rail spur of the S., P. & S. serves the Fir-Tex site. Further advantages claimed for the site selected was its central location with respect to the lumber industry, assuring supplies of raw material for many years.

The company took shape and some of the most prominent names of industry appeared on the board of directors. Prominent among the names was H. F. McCormick, president of Fir-Tex today and actively identified with a wide range of wood-using industries centering about St. Helens.

Construction, September, 1929

In September, 1929, financing of the company was announced as completed and the construction contract was awarded to J. F. Shea Company of Portland. Construction began promptly thereafter and on July 1, 1930, the completed mill stood ready to turn out the finished product, Fir-Tex insulating board, a product new to the Pacific Coast and an all-wood article.

The completed mill represents a high type of construction with steel, brick, tile and steel sash used extensively. The construction progressed on orderly schedule and the anticipated completion dates have been met.

Production is in straight line—a line nearly half a mile long. The principal parts of the plant include a quarter-mile-long dock, a digester house, a stock preparation and storage room, a machine room where the sheet is formed, a drying room, a retort room housing the furnaces which supply the drying heat, a shipping

Perhaps that day is approaching when we will be less interested in the mechanical structure of the tree than in the physical or chemical properties of the fibre therein.

room, a boiler house and a combined office and laboratory. With the exception of the boiler house and the office laboratory, the other units of the plant form one integral set of buildings with an over-all length of approximately a quarter of a mile.

At the water end of the dock a pumping station is located. A main function of the dock, however, is to house a long conveyor which brings the chips—which come in barges from Columbia river sawmills—to the digester building storage. Here the chips are processed in six 18-foot Biggs rotary boilers. The fiber is then disintegrated in a series of hammer shredders. Stock chests are provided for storage and subsequently the stuff passes over a fourdrinier—essentially the standard type used in paper making—which has a wire 13 feet wide and 100 feet long. The machine forms a continuous board 12 feet wide and 7/16 of an inch in thickness when finally dried.

Drying is accomplished in a 13-foot, 8-deck roller dryer 360 feet long thru which the board moves slowly. The dryer is divided into several sections, each of which is controlled by a different temperature. The dryer is similar in construction to those used extensively in other insulating board mills and veneer and plywood plants. The finished sheet is inspected and cut into the standard sizes of 4, 8 and 12 feet.

Burns No Wood

The dryer delivers the board to the finishing room at the end of the plant where the product can be loaded directly upon cars spotted on a depressed track in the center of the building or stored for future deliveries. The storage building is of all steel.

A notable feature of the Fir-Tex mill is the fact that it will purchase all electric power from public utility lines and that it will burn only oil for its steam requirements. This latter point has aroused considerable interest because the predominant fuel in the wood-using industries of the Columbia river region is hogged fuel, a by-product of their own operations. The Fir-Tex plant will have no hogged fuel, however, from its own operations, but instead will divert that class of material to its main product.

The boiler plant is housed in a separate building and comprises three 500 h.p. boilers. The 210-foot concrete stack is a landmark visible for many miles.

Other auxiliary construction at the Fir-Tex plant includes two fuel oil storage tanks and a 50,000-gallon steel water tower. The entire plant is equipped with an automatic sprinkler system for fire protection. The protective idea is carried out still farther in the liberal use of such items as steel, self-closing doors, altho the construction of the entire plant is of a calibre which makes it practically fireproof to start with.

The plant just completed by Fir-Tex is regarded by the company as the first unit of an establishment which may one day be double, or quadruple, the present size. With that idea of eventual enlargement in mind the present plant has been constructed so that it may be

H. F. McCORMICK

Many interests in wood



enlarged with facility without in any way disturbing production.

The present plant has been designed to produce 75,000,000 feet of board annually. The company estimates a production of 2,000 square feet of finished board from one unit of chipped raw material containing 200 cubic feet. The shipping weight is estimated at 700 pounds per 1,000 square feet. Total manufacturing cost is estimated at \$21.66 per M against a sales price of \$35 per M.

As mentioned previously, the list of Fir-Tex officers and directors includes many names well known to industrial life on the Pacific Coast. At the annual meeting on May 13, 1930, the following officers were named: H. F. McCormick, president; A. E. Millington, vice-president and general manager; John S. Koke, secretary; K. J. Carney, assistant secretary and assistant treasurer; K. D. Dawson, treasurer. C. A. Millington is general superintendent.

Mr. Koke is a member of the legal firm of Griffith, Peck & Koke of Portland. Mr. Dawson is well known in shipping circles, being president of the States Steamship Company, Portland.

Directors

The list of directors follows: Charles E. Dant, chairman, Dant & Russell, Portland; H. F. McCormick; K. D. Dawson; Franklin T. Griffith, president of the Portland Electric Power Company; A. E. Millington; F. A. Nitchkey, Portland; C. A. Millington; A. J. Lewthwaite, prominent stockholder in a number of pulp and paper mills on the Pacific Coast and until recently an active vice-president of the Crown Willamette Paper Company; John S. Baker, president of the Fidelity Trust Company, Tacoma; Stanley S. Anderson, capitalist, Los Angeles; Charles A. Shea, of the J. F. Shea Company, Portland contracting firm which built the Fir-Tex plant; W. B. Dean, general manager of the Diamond Match Company, Chico, California; Lee A. Phillips, executive vice-president of the Pacific Mutual Life Insurance Company, Los Angeles; E. B. King, president of the King Lumber Company, San Francisco; and Herbert Fleishhacker, president of the Anglo London & Paris National Bank, San Francisco, and an outstanding capitalist on the Pacific Coast.

President H. F. McCormick is connected in a much diversified way with the wood-using industries. And

at this point we may refer again to the opening paragraph of this article in which it was mentioned that St. Helens was blossoming into a wood-using industrial center unique. Mr. McCormick is identified with all of them. A little discussion of these enterprises would be in order.

First there are the two sawmills of the McCormick Lumber Company at St. Helens, cutting 150 million feet annually. The products here are sawn lumber, but the usual big burners are without occupation, for all the refuse of these two lumber mills is converted into further values. Most of this waste is hogged and transported by scow and car to fill the fuel bunkers of the company's own steam plant or the St. Helens Pulp & Paper Company. Some of the wood is shipped as slabs to the paper mill where it is cleaned, chipped and converted into kraft paper.

Mr. McCormick was one of the figures instrumental in getting the St. Helens Pulp & Paper Company located at St. Helens, and he is today chairman of the board of directors of that institution. The paper mill was completed in December, 1926.

Down below the paper mill is another McCormick enterprise, the St. Helens Creosoting Company, which works up a line of treated lumber products, some of which are ties, poles and bridge timbers.

Carrying the wood utilization idea still further one finds located on this same rail spur the St. Helens Wood Products Company which manufactures handles for brooms, mops and similar implements of plebian and strictly utilitarian nature. In all these the McCormick interests are found. The creosoting plant has been running for about 15 years, the handle factory about six years, the paper mill is now 3½ years old,

and now comes the insulating board plant which, one might say, uses even the slivers.

The McCormicks also operate sawmills at other locations in the Northwest, some of which are diverting their refuse to pulp chips. Then there are a number of McCormick-operated logging camps and finally, but in no ways least, the McCormick line of deep sea vessels which ply ocean routes to all corners of the globe with cargoes largely of wood products.

ON THE OPPOSITE PAGE

¶ The aerial panorama shown on the opposite page presents a theme of complete wood utilization that can not be duplicated on the Pacific Coast today. The view is taken from a point about two miles southeast of St. Helens, Oregon.

¶ In the foreground is the new \$1,500,000 plant of the Fir-Tex Insulating Board Company which is just this month beginning production of Fir-Tex, an all wood-fibre insulating board.

¶ In the left center can be seen the plant of the St. Helens Wood Products Company where broom handles are manufactured.

¶ Following along the railroad track to the right of the photo one sees spread over a considerable area the plant of the St. Helens Creosoting Company, where wood products of another nature are manufactured.

¶ Proceeding along the water another wood-using industry is encountered in the 60-ton kraft paper mill of the St. Helens Pulp & Paper Company.

¶ This mill draws hogged fuel and some waste wood from the two saw mills of the McCormick Lumber Company situated farther down stream. One sawmill is seen on the tip of the island, while the other is on the mainland almost directly opposite but scarcely discernible due to the distance from the camera and the high land and trees intervening.

¶ The town of St. Helens can be seen strung along the banks of the Columbia River for some distance beginning with this second McCormick sawmill.

¶ The many rafts of logs in the right foreground give some further idea of the important part played by wood in the industrial life of the St. Helens community.

FIR-TEX INSULATING BOARD CO.

St. Helens, Oregon

Balance Sheet, April 30, 1930

ASSETS			
Cash in Banks.....		\$	286,865.14
Accounts Receivable			3,313.99
Notes Receivable			421,730.00
Balance due on subscriptions to company's capital stock.			
Fixed Assets—			
Buildings	\$448,729.48		
Equipment	986,081.22		
Miscellaneous Construction	44,951.89		
Expenses during Construction—Net	24,020.07	1,503,782.66	
Real Estate—Factory Site		47,000.00	
Patents, Formulas, Trade Marks		153,073.00	
Stock Sales Expenses		460,600.00	
Inventory of Operating Supplies.....		23,153.99	
Total Assets			\$2,899,518.78
LIABILITIES			
Current—			
Accrued Payroll	\$ 10,047.29		
Accounts Payable	14,920.25		
Contracts Payable—Equipment	295,467.44		
Due Contractors for Construction	78,083.80		
Total Liabilities			398,518.78
Capital Stock—			
Class A—Common Stock (Non-voting)			
Authorized—25,000 shares, par \$100.00 each.			
Issued	\$1,730,100.00		
Subscribed—Not fully paid.....	769,900.00		
		\$2,500,000.00	
Class B—Common Stock (Voting)			
Authorized—35,000 shares, No par value	1,000.00	2,501,000.00	
			\$2,899,518.78

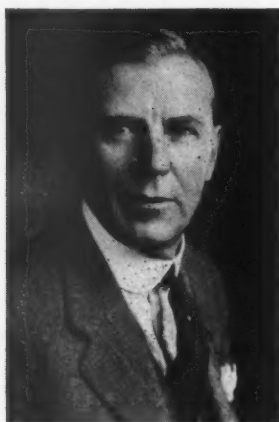
Why manufacture an insulating board? The thought suggests an analogy. The present day salesman employs psychology in his work and isn't afraid to use the scientific name. The old school salesman used psychology also, but he refused to recognize his tactics by that name, insisting that he just used common sense. So with insulation, the idea of insulation is not new. The Romans, we believe it was, employed slaves to pack snow down from the mountains to cool their drinks, and this snow was packed in straw to delay the melting. That was insulation, but maybe they refused to recognize the name while employing its principle.

Today the architects, builders, contractors, and the home owners also, are getting sold on the idea that insulation is an integral part of all construction even as windows and doors and lumber and paint and plaster. The strenuous broadcast advertising carried on by the pioneer firms manufacturing insulation materials is gradually making the idea of insulation soak in and today we are calling it by its first name.

At first one thinks of insulating as something to keep out the cold, and due to this line of incomplete



Brubaker Aerial Surveys, Portland



At left
A. E. MILLINGTON
Vice-President and General Manager



At right
C. A. MILLINGTON
General Superintendent

reasoning one finds even today an unnecessarily large percentage of builders and contractors belittling the idea that insulation is necessary in a mild climate such as enjoyed by the Pacific Coast states. The true function of insulation is to retard the passage of heat from one area to another, whether it be the cold of winter trying to get thru the walls of a residence or the cold in the interior of a refrigerator trying to escape to the great outdoors.

In residence construction alone insulation board is finding an ever increasing use and acceptance. The idea is carrying down from the colder regions to those climes where old Sol works overtime. The Egyptian railways, for example, not long ago placed a large order for insulating board to be placed under the roofs of their buildings to destroy the violence of the sun's rays.

The extensive growth of the refrigeration industry has created a vast market for insulating materials. Commercial refrigeration in stores and markets, domestic refrigerators, railway refrigerators, refrigerator ships on fast cross-seas service, fishing boats equipped with refrigeration, cold storage and commercial ice plants, all these are calling for insulation.

Insulation board is also being used extensively to delay the transmission of sound as well as heat. The tendency of we moderns to live in apartments and hotels, together with the development of the radio and the phonograph (belonging to the neighbors) is forcing the use of insulation board in these cliff dwellings of today.

The talking pictures have put a new interpretation on noises in general and as a result insulation board has come to the fore with its acoustical properties. It is being used to deaden the transmission of sounds thru floors and walls in apartments, hotels and offices. Some cities are revising their building codes to enforce the use of sound insulating materials in certain types of buildings. Elsewhere the law of supply and demand is writing the insulation clause into the code because the people are moving into the newer buildings which have been sound-proofed and vacating the places where the next door radio vibrates thru.

And in purely structural uses the new type boards are finding wider fields. Who knows but what we are approaching the day when we will no longer be interested in the original mechanical structure of the tree, but only in the fibre content therein?

E. M. Mills Visits Northwest

Following a busy trip to the Northwest during the course of which a visit was made to the several pulp and paper plants under his jurisdiction, E. M. Mills returned to his San Francisco offices by plane from Seattle in June.

Mr. Mills is a principal executive in the Rainier Pulp & Paper Company at Shelton, the Grays Harbor Pulp & Paper Company at Hoquiam, the Washington Pulp & Paper Corporation at Port Angeles and the newly completed Olympic Forest Products Company, also of Port Angeles. All mills are in the state of Washington.

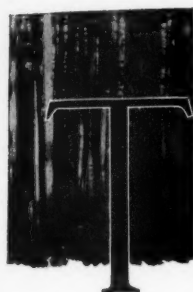
FIBER INSULATION BOARD MANUFACTURERS

Prepared by U. S. Forest Products Laboratory—1929

Trade Name	Firm Name	Main Office	Plant Location	Nature of Raw Material Used	Capacity (Lockwood)
Celotex	Celotex Company	Chicago, Ill.	Marrero, La.	Bagasse and waste papers	750,000 lbs.—24 hours
Thermosote	Agasote Mill Board Co.	Trenton, N. J.	Agasote, N. J.	Waste papers	150,000 lbs.—24 hours
Flaxlinum	Flaxlinum Insulating Co.	St. Paul, Minn.	St. Paul, Minn.	Grain straw	
Nu-wood	Wood Conversation Co.	Cloquet, Minn.	Cloquet, Minn.	Mill waste	
Insulite	Minn. & Ontario Paper Co.	Minneapolis, Minn.	International Falls, Minn.	Mill and woods waste	600,000 sq. ft.—24 hours
Masonite	Masonite Corporation	Laurel, Miss.	Laurel, Miss.	Mill waste	180,000 lbs.—24 hours
Inso Board	Stewart Inso Board Co.	St. Joseph, Mo.	St. Joseph, Mo.	Grain straw	100,000 lbs.—24 hours
Lith (various)	Union Fiber Company	Winona, Minn.	Winona, Minn.	Grain straw	
Maftex	McAndrews and Forbes	New York City	Camden, N. J.	Licorice waste and waste paper	70,000 sq. ft.—24 hours
Maizewood	Oswego Board Corporation	New York City	Oswego, N. Y.	Wood	100,000 lbs.—24 hours
Maizewood	Maizewood Products Co.	Chicago, Ill.	Dubuque, Ia.	Cornstalks	
Ten Test	International Fiber Bd., Ltd.	Ottawa, Canada	Gatineau, Que.	Wood	
Fir-Tex	Fir Tex Insulating Bd. Co.	St. Helens, Ore.	Midland, Ont. St. Helens, Ore.	Mill waste	750,000 sq. ft.—24 hours
Plans Under Way					
Chicago Mill & Lbr. Co.	Chicago, Ill.	Greenville, Miss.	Woods and mill waste		
Newport Co.	Carrollsville, Wis.	Jacksonville, Fla.	Extracted chips		
Hercules Powder Co.	Wilmington, Del.	Brunswick, Ga.	Extracted chips		

Will Bark 22-inch Logs

\$100,000 Pioneering Installation Aimed at Greater Wood Utilization, More Efficient Handling and Improved Quality of Product



HE largest barking and chipping plant in the world will be installed this year by the British Columbia Pulp & Paper Company, operating pulp plants at Woodfibre and Port Alice, according to announcement made by President Lawrence W. Killam. This undertaking marks a somewhat revolutionary step in the Pacific Coast woodpulp industry and one of the most important pioneering efforts attempted in recent years, as it is

expected to go a long way toward effecting pulpwood conservation and at the same time enable mills to make profitable use of material which under present conditions is wasted.

The heaviest Thorne barker so far manufactured will be installed, capable of handling logs 10 feet long and with a diameter up to 22 inches. This barker will be operated in the yard outside the Port Alice mill on Northern Vancouver Island. The barked wood will be conveyed direct to the chipper inside the mill, the logs being left intact without being split. Splitting equipment is being installed to handle logs of 24 inches in diameter or greater. It is hoped that the barker will eventually handle logs of larger size than presently designed for.

This installation will involve the building of new conveyor equipment to carry logs from the present log haul. The cost of the entire installation will be upwards of \$100,000.

"Our objective is twofold", explained Mr. Killam. "We want to save waste in the sawmill and make it possible to carry out worth while experiments in utilizing parts of the tree which under present conditions of logging are frequently left in the woods, due to the economic unprofitableness of bringing this class of wood out.

"In places where there is a long haul by wire rope to transportation the tops are usually battered or broken off. I believe that by cutting the tops off in the woods and conveying them separately considerable wastage may be eliminated, while in places where the timber is readily accessible to rail or water it should be possible to make use of a very high percentage of tree tops.

"Under present conditions of logging in the Pacific Northwest we estimate that the loss in a tree due to the non-utilization of the top is fully 20%. We intend to save that 20%. Of course, in the average tree top there is bound to be a higher percentage of waste than in other parts of the tree owing to the knots and branches, but by the new process of handling we hope to clean this wood with the least possible wastage.

"We have been considering means of accomplishing this purpose for some time", added Mr. Killam, whose company has achieved rather conspicuous success in elimination of waste and production of quality pulp.

"As a preliminary experiment we sent a shipment of pulpwood logs to the International Paper Company's Canadian plant in Hawkesbury, Ontario, where Thorne barkers are being operated under the personal supervision of C. B. Thorne, recently elected vice president of International in charge of sulphite manufacture. The experiment was a complete success—so much so, in fact, that we did not hesitate long in placing orders for the necessary equipment."

In company with W. L. Ketchen, plant manager of the B. C. Pulp & Paper Company's mill at Port Alice, President Killam visited Eastern Canada and went thoroly into the technical problems involved in the present project. The two men visited the plant of the Restigouche company, subsidiary of the Fraser companies in Athol, New Brunswick. They witnessed the



The Port Alice mill of the B. C. Pulp & Paper Company

initial operation of Thorne barkers there, big enough to handle logs 19 feet long—considerably smaller than the British Columbia installation.

"There we saw logs of lumber size run through the 19-foot barker and then put back into the river and run to the sawmills. The slabs were sent on to the pulp mills for chipping", said Mr. Killam. "In that way particularly economical operation was insured and the ideal combination process accomplished, with both sawmill and pulpmill benefiting to the maximum."

The chipper to be installed at Port Alice will be a product of the Karlstads Machine Works of Sweden, altho the Paper Mill Equipment, Ltd., of Montreal, will carry out the actual installation. This latter firm is represented in British Columbia by Reider Johanneson. The next largest chipper in operation on the Pacific Coast is believed to be at Everett, Washington. The B. C. Pulp & Paper Company expects to handle six cords an hour.

The barker is to be constructed by the Canadian Allis-Chalmers Company of Toronto and Vancouver, and the whole layout will be planned and supervised by the company's head office in Toronto.

WOOD CONVERSION COMPANY

Cloquet, Minnesota

June 13, 1930

Pacific Pulp & Paper Industry,
Seattle, Washington.
Gentlemen:

Answering your wire of June 13th, addressed to Mr. H. C. Hornby, President, Northwest Paper Company, Cloquet, wish to advise that there are several conversion plants contemplated at Longview, Washington, in connection with sawmill operations at that point. This appears to be a desirable location because of the plentiful supply of raw materials available. The construction of the plants above referred to will not begin until market conditions justify the expenditure. We shall be glad to furnish you with an announcement of our plans when such time arrives.

Yours very truly,
WOOD CONVERSION COMPANY.

E. W. DAVIS,

General Manager.

EWD:O

The above letter puts a definite status on the announcement made by President Hornby from Cloquet on June 13 that the Northwest Paper Company was planning to construct a new pulp mill and wood products plant at Longview.

Cloquet is the original home grounds for the widespread interests of Weyerhaeuser Forest Products. In that city the Weyerhaeusers have built up a number of affiliated enterprises not to be duplicated on the American continent, if anywhere. These enterprises all rest on wood as a raw material and the products include several grades of pulp, book and newsprint paper, wood insulating materials, lumber, wood specialties. The Northwest Paper Company is the parent organization of these several enterprises.

The Weyerhaeuser Timber Company operations on the Pacific Coast are distinct, but enjoy working relations with the Midwest Weyerhaeuser group. When Weyerhaeuser completed one of the biggest sawmills in the world at Longview about two years ago the question was raised, "What will they do with the waste wood?" That question still remains unanswered. Longview presently has three major wood-using enterprises, namely, the Weyerhaeuser mill, the Long-Bell Lumber Company, and the Longview Fibre Company, the latter drawing the bulk of its wood in the form of waste from the Long-Bell mill.

The new Weyerhaeuser mill at Longview has steadfastly declined to enter into contracts which would tie up its supply of wood waste, and this action has served to stimulate conjecture with respect to future venturing into allied wood-using industries. Pulp and paper have held the foreground in this speculation. It is no secret that Weyerhaeuser has been thoroly investigating the feasibility of wood by-products plants to utilize the waste wood, but no announcements of plans have been made.

The announcement of the Northwest Paper Company's projected move to Longview came immediately after the St. Louis county (biggest Minnesota county and timber hinterland of the Weyerhaeusers) commissioners rejected Weyerhaeuser's proposal to enter 172,000 acres under the new Minnesota reforestation law. The law provides a nominal tax of 5c per acre plus 3c per acre fire protection up to 50 years, with a 10%-of-value tax at time of cutting. St. Louis county rejected on plea that further legislation was required which would provide funds for schools and local governments during interim of low taxation.

New Port Angeles Mill in Production

Tuning over their new sawmill unit for the first time on June 9 and beginning the production of sulphite pulp the following week, the Olympic Forest Products Company by the first week of July had stepped its production up to more than 100 tons daily. The new Port Angeles plant has a daily capacity of 175 tons of high grade bleached sulphite.

First production was not put through the bleach plant, the first runs being considered somewhat in the light of a test. The quality right from the start, however, was exceptionally satisfactory and the original decision to delay the opening of the bleach plant was revised and this part of the mill was rushed through so that bleaching could begin the middle of July.

The mill as a whole moved into production with unusual smoothness. The contractors and engineers had during the fall, winter and spring months pushed the construction along at such speed and with such thoroughness that the first of June found all major work done and the tuning up in progress.

The sawmill has been cutting select Western hemlock lumber for the market and diverting the remainder of the log to pulp chips and hogged fuel. Not one sliver of the log at Port Angeles is allowed to pass without giving up some return value.

Sawmill operations got a bit ahead of the other parts of the plant so that this unit had to slow down at first. Cooking and screening operations rapidly got into tune and the Minton Vacuum Dryer, first of its kind on the Pacific Coast, moved into operation smoothly.

Most of the Port Angeles mill production has already been contracted for, the S. D. Warren Company of Maine being a principal customer.

Acquire Defunct Northwestern Holdings

The bulk of the real property in Clatsop county, Oregon, formerly owned by the Northwestern Pulp & Paper Company has been transferred to the Oregon Sulphite Pulp Company by W. H. Thomas, M. C. Meservey, R. E. Jackson and J. F. Lozo through the assignment of a sheriff's certificate of sale.

The four grantors obtained a judgment on December 24, 1929, against the bulk of the 4,347 acres in this county owned by the Northwestern company and it is this property that is transferred. It includes timber land scattered throughout the county, together with Astoria property.

So far as can be learned at the present writing Oregon Sulphite Pulp Company is composed essentially of a group formerly identified with the Northwestern company.

Mill H Closes Down

With the closing down for the year of Mill H, ground-wood pulp mill of the Crown Willamette Paper Company on the Oregon City side of Willamette River, owing to low water conditions, the report is current that the mill is closed for good.

This is the pulp unit of 40 tons capacity built for Crown Paper Company by W. P. Hawley, Sr., when manager of that concern many years ago. Mill H was taken over by Crown Willamette, and for years the pulp has been shipped across river to West Linn.

It is understood that several schemes have been studied by the company to reduce the expense of rehandling the pulp, among them being to pump slush pulp across the river.

Airplane Speeds Alaska Pulp Surveys

Distances and topography are taking an awful wallowing lately. The airplane is doing it. For the past three years two groups—headed by Publisher George Cameron and the Zellerbachs respectively—have been conducting a preliminary survey in Southeastern Alaska looking toward the eventual establishment of mammoth paper mills in the Juneau and Ketchikan territories.

Wendell Dawson, field engineer looking into the hydro-electric possibilities, has found the airplane a valuable aid that reduces days to hours, or even less. With the aid of a whirling propeller his party can leap up and over a mountainside, flutter down to a smooth landing upon a hidden lake and have the work done before they could even arrive if dependent upon other forms of transportation. Mr. Dawson writes:

"The article written by Major Nelson in your April issue regarding the use of the airplane in the pulp industry was extremely interesting. As visible evidence of the use which has been made of the airplane in our investigational work in Alaska, I am enclosing a photo taken by the mechanic of the plane shown.

"Lake Dorothy is about 20 miles distant from Juneau on the east shore of Taku Inlet and is 2,400 feet above the sea. To visit the lake in the usual manner would require the chartering of a gasboat, a three hours run by water, and an arduous climb on foot of at least 3,500 feet. At least two days would be required to reach the lake.

"The Lockheed-Vega plane shown in the photograph, could leave Juneau with three men and field equipment, not including pilot and mechanic, and reach the lake in about 15 minutes. On one occasion an order for



This high up view of Lake Dorothy in Southeastern Alaska, inadequately presents the real difficulties of field surveys where foot travel is depended upon. The lake is 2400 feet above sea level (distant waters in upper portion of photo). The surveying party used a plane to reach the lake and landed three men and equipment on the lake fifteen minutes after taking off from Juneau. In landing the plane came thru the low saddle at the lower right center.

Alaska Forest Service Takes To Air

The U. S. Forest Service is making use of the airplane for cruising and inspecting its holdings in the Tongass National Forest of Southeastern Alaska where land and water—and mostly water—travel is slow and laborious. The Forest Service has chartered the seaplane Taku to carry B. F. Heintzleman, in charge of forest sales, and others for inspection tours.

Powell River Construction Program Progressing

Construction progress at Powell River Company's new water power and newsprint project has been uninterrupted during the past month, and in certain phases of the \$8,000,000 improvement job it is now possible to visualize the completed work.

The walls and main floor of the new machine room are going up, and the ground wood mill is well under way, with walls between the basement and the main floor having already been erected. The basement slab and foundations have been laid.

Extension of the steam plant has been begun and a boiler designed to operate at 600 pounds per square inch pressure is being installed.

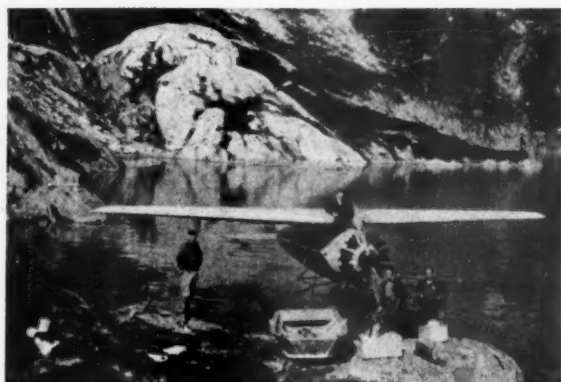
At Lois River, site of the new power development, all the preparatory work has been carried out and actual construction is now under way. Twelve tiers of logs have been placed at the temporary dam site and rock filling and concreting is progressing rapidly. Building of the power house has already been started.

The inclined railway to run alongside the steel penstock line is now under construction. This will run from the power house to the south portal. The power house camp has been increased to accommodate the larger number of men employed on the job.

The tunnel which is to carry water from Lois River to the penstocks and power plant at Stillwater is now 32% completed, both ends being bored through solid granite at present.

Visit Grays Harbor Mill

J. F. Wuenschel, who handles the sales for the 50-ton sulphite bond paper mill of the Grays Harbor Pulp & Paper Company at Hoquiam, Washington, was host to the sales representatives of the Portland division of the Zellerbach Paper Company in June.



This plane landed five men and equipment on Lake Dorothy, 2400 feet above sea level. At left is Wendell Dawson, in charge of the water power field studies for the Zellerbach and Cameron paper mill projects in Southeastern Alaska. In the plane is Pilot Ansel Eckman of the Washington-Alaska Airways; next is Jerry Wootan, field engineer, and William Fromholz.

supplies was given the pilot who flew to Juneau and returned with the supplies in 30 minutes, less time than would be required to get a delivery in Juneau.

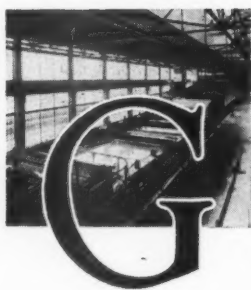
"Travel by air is rapidly increasing in Southeastern Alaska and the gasboat will be relegated to its proper place. There is no doubt but that the companies now interested in the pulp and paper developments here will make increasing use of the airplane. Recently a Lockheed-Vega plane, similar to the one shown in the photo, flew from Seattle to Ketchikan in 5 hours and 32 minutes. The usual steamer time is 45 hours or more. This country which has long been more or less remote from the rest of the world, is now only a few hours distant by air."

The PAPER BOX MANUFACTURERS

Sixteenth Annual Convention



RUFUS C. HOLMAN
New President



OD made Victoria for our purpose. The environment is delightful and centuries of breeding have produced a most hospitable people there to welcome you. Your committees have been diligent, and I am confident efficient in effecting arrangements for your exceptional entertainment. Particularly, I am sure, the ladies will enjoy themselves. Therefore, if

you, yourselves, will bring in your own persons that jovial and happy charm which has so manifested itself at previous conventions, a never-to-be-forgotten recreational convention awaits you."

So spoke Rufus C. Holman of the Portland Paper Box Company, Portland, and general chairman of the sixteenth annual convention of the Pacific Coast Paper Box Manufacturers Association in his invitation to that association's members to come and enjoy themselves from June 22 to 25 at Victoria, British Columbia's capital, on beautiful Vancouver Island.

They came, the gentlemen and the ladies, they saw, they visited and played golf, they sat down to serious business discussions and, as General Secretary Hugh Peat officially expressed it, the sixteenth annual convention was outstandingly successful and enjoyable.

The convention party established headquarters in the expansive Empress Hotel where the roomy lobbies, overlooking the inner harbor and the capitol buildings, afforded an environment for relaxation conducive to the renewing of fellowship.

The California contingent started a caravan from Los Angeles and added to it at San Francisco and Oakland, Portland, Longview and Seattle. From Seattle the delegates sailed by auto ferry for Victoria and opened the convention with a reception of visitors on Sunday afternoon. While Mrs. R. E. Barker and Miss Jeanette Stettler acted as hostesses for the ladies' entertainment the men donned their plus fours and immediately got into the business of settling the golf championship by playing the qualifying round at the Colwood Golf and Country Club. A. J. Schoephoester, Union Paper Box Company, Seattle, than whom no one likes golf better, was a "natural" as golf chairman.

On Monday morning the delegates had an official word of welcome from His Worship, Herbert Anscomb, Mayor of Victoria. His brief and forceful message was heartily applauded and was officially responded to by President Charles Ruble, Standard Paper Box Company, Los Angeles.

Due to absence, the scheduled paper by C. B. Kerr of the Hollywood Paper Box Company, Hollywood, had to be omitted, but the subject, "The Value of Advertising", was nevertheless a live topic of discussion and resulted in a resolution which placed the association as opposed to group advertising at the present time. The resolution affected only the association as a whole and in no way restricts advertising sponsored by any local group.

Canada's aggressive box maker, Russell E. Barker of the National Paper Box Company, Ltd., Vancouver, past president of the association, deviated from his original subject and chose to talk instead on "Sales Problems". Mr. Barker touched upon current problems of the business and advocated that a period of slow business was a good time for the paper box makers to analyze their product anew and discover new sales points. Instead of trying to sell so many paper containers as containers he suggested that such ele-

NEW OFFICERS

Pacific Coast Paper Box Manufacturers' Association

PRESIDENT

Rufus C. Holman.....Portland

VICE PRESIDENT

R. O. Comstock.....San Francisco

SECRETARY

C. B. Kerr.....Los Angeles

EXECUTIVE OFFICERS

Charles Ruble.....Los Angeles

Harry N. Simmons.....Seattle

GENERAL SECRETARY

Hugh Peat.....San Francisco

1931 MEETING

Choice left to executive committee.



THE PACIFIC COAST PAPER BOX MANUFACTURERS GET TOGETHER

Here they are, officially assembled, ladies and gentlemen, from sunny California to also sunny Victoria, B. C., posing on the front steps of Canadian Pacific's fine Empress Hotel, for the official convention picture.

ments as the advertising appeal of the package be given more prominence. The customer's viewpoint should be studied and every endeavor be made to offer a product that finds some new sphere of usefulness. Many of the undesirable practices of the business, Mr. Barker, pointed out, have been brought about by the paper box manufacturer's themselves by unnecessary extensions of service, as for example, the habit of the purchaser of maintaining his storage at the box factory instead of in his own plant.

A high point of the meeting was the address of Howard P. Beckett, Commissioner of the National Paper Box Manufacturers Association, on Tuesday morning.

Mr. Beckett told how the paper box industry had evolved a code of fair trade practice rules thru a series of preliminary discussions and how, after agreeing upon procedure among the members of the industry itself, had finally placed the plan with the Federal Trade Commission.

"No code of trade practice should be expected to be a panacea of business ills", Mr. Beckett said. "While most men are honest, yet they are all human, and we have found that most unethical practice can be traced to ignorance of what is right and what is wrong, rather than to malicious intent, altho every industry will have some truly dishonest people in it. Trade practices are only a set of ethics and a restatement of existing laws.

"Most of us talk glibly about Sherman anti-trust laws, but I'll venture to say that most of us do not know exactly what the law is. Few of us have taken the trouble to actually read the laws. The laws on trade practice are not definite. In crimes such as murder we have exact definitions, describing the different degrees of the crime, but in trade practice we are only told what we can not do, and it has been necessary to carry cases to the supreme court to get definitions of the law.

"At first the business men regarded the Federal Trade Commission as a nuisance, unnecessarily poking its collective nose into the private affairs of industrial life. Later industry began to give to the Federal Trade Commission a constructive interpretation. An example of this was the paint industry, which had been badly disorganized. They went to the commission many years ago asking assistance and since then many other lines of business have sought aid and received it."

Mr. Beckett stressed the point that fair trade practice rules applied to anyone in the industry whether a member of an association or not. Some of the phases in which the Pacific Coast members were particularly interested were rules on anti-dumping (for a long time a particularly sore point with Coast manufacturers of all kinds), selling below cost, selling to one competitor at a lower cost than to another. In connection with these last named points Mr. Beckett stated that in the East these measures had greatly stimulated the installation of cost systems, a practice which could not help but improve the standards of business.

In general, Mr. Beckett said, he had found that the paper box industry, or at least the set-up box division—which has really put the trade rules into operation—were keeping remarkably level headed during the current dull business and were remaining in line. They had apparently appreciated that there is only so much business and that a thinner division of the total must be accepted for the time being.

Mr. Beckett's paper opened up a general discussion which was freely entered into by most of those present. There were questions and answers on how the trade practices were enforced, how costs were established, how the unruly were handled. Fair trade practices were designed to help the members of the industry to get along, but the Federal Trade Commission could be used on occasion like a sharp stick to prod the wavering back into the fold of the righteous.

W. H. Thomas of Fibreboard brought up a practical



A. J. SCHOEPHOESTER
Golf Chairman



RUSSELL E. BARKER
He welcomed



C. B. KERR
New Secretary

question when he questioned Secretary Peat on the number of complaints that had been filed with him in the several months since his appointment to act for the Federal Trade Commission. To this Mr. Peat replied that but one case had been made and that it had been adjudicated when he brought the parties together and pointed out to the defendant wherein he had transgressed.

At this point Secretary Peat emphasized that the machinery for securing fair trade practice was no good unless put to use, and that he acted only as an adjudicator and could not go out looking for trouble. Mr. Thomas added that "we ought to use this machinery or throw it overboard."

This discussion on trade practices afforded a lively session for which Mr. Beckett was heartily thanked. It resulted in a resolution being adopted which would permit the secretary to draw upon association funds temporarily to finance travel and other expenses incidental to trade practice investigation.

Tuesday evening was given to feasting and entertainment with a banquet at the Hotel Empress.

At the Wednesday session F. V. Simpson of Portland spoke on "What Constitutes a Profit and Why." The business session closed with the election of officers with Rufus Holman of Portland advancing to the presidency. The selection of the next meeting place was left open to the decision of the executive committee, altho it was intimated that the convention would probably return to its old stamping grounds at Del Monte, California, next year.

The delegates were unanimous in declaring the Victoria meeting both delightful and profitable. The several committees were congratulated frequently for the many features and entertainment provided for both the gentlemen and ladies.

The golf tournament, always a main article of the paper box convention diet, went like this:

First flight—Winner, A. E. Stein; runner-up, Bert Challoner; defeated fours, R. C. McCrystal.

Second flight—Winner, L. Millbrandt; runner-up, Gus Trost; defeated fours, Howard Beckett.

Third flight—Winner, G. A. Sweet; runner-up, Hugh Peat; defeated fours, C. D. Allen.

R. W. Mayhew of the Sidney Roofing & Paper Company, Ltd., won the guest flight and J. N. Finley held

low net for the guest flight. A. J. Schoephoester took both low gross and low net in the qualifying round. Payson Thompson took high gross. Walter Grigsby had highest total gross of defeated players for four days and Walter Simpson had low net of defeated players.

Consolidated Paper Box Company of San Francisco wired regrets for non-attendance because, like Lindbergh, they had become the parents of a new organization, Raisin & Thiebaut, Ltd. And the members of the new firm, formed by a new business association between two former rivals, wired their best wishes and their assurance that they would seek membership in the association.

THOSE WHO ATTENDED

LOS ANGELES—Charles Ruble, Standard Paper Box Company; Albert E. Stein, Angelus Paper Box Company; R. C. McCrystal, Fibreboard Products, Inc.; Fred Kewell, Los Angeles Paper Box Company.

PORTLAND—Payson Thompson, Portland Paper Box Company; F. C. Stettler and C. A. Morgan, Stettler Manufacturing Company; Rufus C. Holman, Portland Paper Box Company; F. L. Dielschneider, Oregon Paper Box Factory; W. D. Grigsby, Grigsby Brothers; Louis Milbrandt, Pacific Paper Box Factory; R. J. Clark, Columbia Paper Products Company; Myer C. Rubin, secretary.

SEATTLE—Frank Wright, Standard Paper Box Company; J. Duehrsen, Pacific Label & Carton Company; J. L. Norie Sr. and J. L. Norie, Jr., Coast Carton Company; A. J. Schoephoester and Oscar Bergland, Union Paper Box Company; J. C. Scully and J. H. McGrath, Puget Sound Paper Box Company; H. M. Simmons, Northwestern Paper Box Company; L. D. Hinchler, Hinchler Paper Box Company; H. A. Campbell, Fibreboard Products Company.

SAN FRANCISCO AND OAKLAND—Wm. J. O'Donnell and Gus Trost, Fleishhacker Paper Box Company; R. Schmidt, Jr., and E. F. Wuthman, Schmidt Lithograph Company; W. H. Thomas, Fibreboard Products, Inc.; C. D. Allen and Fred C. Kewell, Western Paper Box Company.

BRITISH COLUMBIA—H. S. Beckett, Victoria Paper Box Company, Ltd.; Victoria; R. E. Barker, Wm. Smithson and H. Barraclough, National Paper Box Company, Ltd., Vancouver; Percy Shampier, Dominion Carton & Envelope Co., Edmonton.

GUEST—H. B. Beckett, Commissioner, National Paper Box Manufacturers Association, Philadelphia.

ALLIED TRADES—Neil B. Sinclair and James F. Nields, Nashua Gummed & Coated Paper Company; Charles Schaub and George A. Sweet, Pacific Straw Paper & Board Company, Longview, Washington; Robert Mayhew, Sidney Roofing & Paper Company, Ltd., Victoria, B. C.

RESEARCH

to be conducted on

Western Woods

As explained

By C. E. CURRAN

In charge, Section of Pulp and Paper

FOREST PRODUCTS LABORATORY

Madison, Wisconsin

Editor's Note—Now that Congress has recognized the need of the Pacific Coast timber-using industries for further research with an increase to \$25,000 of the budget item for study of Western woods, the U. S. Forest Products Laboratory has outlined a program for utilization of the funds.

IN setting up this program of work proposed on pulping of Western wood, 1930-1931, we have taken counsel with our western District Forest Offices and with various representatives of the pulp and paper industry familiar with western conditions. We propose to continue to avail ourselves of these sources of information and expect to devote considerable time during this first year of the project to contacts with the western industry, with the universities and other centers of research in the western states and with various informed individuals and associations. We will keep in constant touch with the district offices and will make it a point to keep the various regional foresters and forest products men completely informed of our plans and progress as well as make most of our contacts thru them.

It is apparent thru such observations as we have already made that relatively satisfactory progress is being made commercially in the pulping of Sitka Spruce and Western Hemlock. Additional work on these species will be done in connection with this project, but will be mainly of the nature of improving the application of standard pulping methods or applying the new semi-mechanical methods in much the same way as has been done with the western and southern species.

The activities of our Regional Forest Officers indicate that Douglas fir offers the most urgent utilization problem in the West. We are therefore proposing to place the main emphasis of our pulping work on this species. As a tentative program two preliminary objectives have been set up in connection with fir.

The first objective is an evaluation of various lots of Douglas fir representative of different age and growth conditions. In the preliminary work, at least, we will confine our attention to sources likely to be of importance for pulp wood.

The need for this survey arises from the fact that one

OUTLINE FOR WESTERN WOODS STUDY

THE following is an outline of the plans for work proposed on pulping of western wood, 1930-31, essentially as they are stated in the Program of Work of the Forest Products Laboratory for 1930-31.

Project No. 168-7

Title—Increased utilization of western pulpwood species for pulp and paper.

Purpose—To increase the utilization of particular western pulpwood species to permit expansion of domestic production when required, manufacture in the most economical location, improved practice of forestry through better means of utilization.

Status:—July 1930—U. S. Dept. of Agriculture Bulletins 343 and 1485 present data on western species. A survey of the Pacific Coast pulp and paper industry with inspection of typical woods and sawmill operation was made in 1928 and a research program on western woods mapped out.

The suitability of Sitka spruce for high quality bleached sulphite papers has been determined.

Reports and Publications 1929-30—"The relation of the work of the Forest Products Laboratory to the Pulp and Paper Industry," by C. C. Heritage, Pacific Pulp and Paper Industry.

"The problems of the Western Pulp and Paper Industry and Forest Utilization," by C. C. Heritage, Pacific Pulp and Paper Industry, March, 1929.

"Pulp Development on the Pacific Coast," by Carlisle P. Winslow, Timberman, Vol. 31, No. 1, 1929.

Work Planned, 1930-31—1. Evaluation of Douglas fir from different localities and of varying age and growth characteristic.

2. Application of standard pulping processes, and semi-mechanical processes, to Douglas fir.

3. Study of producing strong light colored pulp from Douglas fir.

4. Preliminary investigation of other western pulpwood species now only of limited use.

5. Improvement of application of standard pulping procedures to Sitka Spruce and Western Hemlock.

of the principal objections to the pulping of fir, is the claim that it varies widely in its pulping characteristics, depending on growth or age factors of the type above noted. Unfortunately accurate data in this connection is not available. In the past two years we have developed a standard method for the physical and chemical evaluation of pulpwood which applied to samples of various sources will give us a good index to any marked differences in chemical or physical characteristics. Such data can be tied in with growth conditions and also with pulping properties.

This physical and chemical evaluation of wood is a rather time consuming and expensive process, but in our judgment will be well worth the time and expense. We have already made tentative arrangements to secure representative lots of fir thru our district office in Portland and this work will get under way immediately after July 1.

The second objective or line of attack will be actual pulping studies on Douglas fir, using standard methods. The sulphate or kraft process is already being used commercially with this species, but it is our understanding that results are not entirely satisfactory. One of our first activities will be to check thru the variables of sulphate pulping as applied to fir and if possible develop a more satisfactory technic in this regard. Incidentally this will give us an opportunity to apply the same principles which we have used so successfully on southern woods in developing strong white papers from the latter species. As was the case with the southern wood study, the present work will probably require both small scale

and semi-commercial scale pulping tests, including considerable chemical research of a somewhat fundamental type.

In addition it seems desirable to devote some attention to the application of the soda and sulphite processes to Douglas fir, particularly the use of sulphite liquors in which soda is used as a base instead of lime. We also plan later to try the adaptation of the mechanical and semi-mechanical process, particularly the semi-chemical process, to Douglas fir in the production of pulp boards and products of a similar character.

So far as other species than Douglas fir are concerned somewhat similar plans, but on a somewhat less elaborate scale, will apply. The probable development as regards Sitka Spruce, and Western Hemlock has already been mentioned. Preliminary studies will be made relative to either white fir, larch, red wood, or western cedar, depending upon which of these species or group of species appears to warrant action. This work for the time being will be subordinated to the work on Douglas fir.

The work above outlined will require considerable time. The details of its extension will depend upon the facts developed in the preliminary surveys and in the course of the study itself as it progresses. As a matter of record we expect to issue reports from time to time indicating progress of the work and developments of significance. Such reports will be released to the trade press and thru the various publicity agencies of the service.

Sitka Spruce Mill Re-Organization Hinted

Altho reports are meager from the Coos Bay district of Oregon, where the Sitka Spruce Pulp & Paper Company last November began production in a new 50-ton unbleached sulphite pulp mill and sawmill, indications are that a reorganization of the company may be effected.

J. B. Wilt, who was chiefly instrumental in the design and construction of the pulp mill under the direction of the company president, C. McC. Johnson, veteran Oregon Coast lumberman, has left the company and is now located at Salem, Oregon.

President Johnson, always close-mouthed regarding the plans of the company, has offered no information. It is said, however, that both Herbert Fleishhaker, one of the best known bankers and capitalists of the Pacific Coast, together with Stanley Dollar of shipping fame, are prepared to put new capital into the Sitka Spruce mill and perhaps rebuild it.

While there has been no direct admission of the fact, it is said, however, that both Herbert Fleishhacker, one financially interested in the Sitka Spruce mill. Mr. Dollar and Mr. Johnson are relatives by marriage.

Meanwhile production of pulp continues at last reports, the daily output being about 40 tons.

New B. C. Pulp Company Incorporated

Port Hardy Pulp Company, organized in Vancouver, B. C., to operate a mill at Tsulquate River at the north end of Vancouver Island, appears among the latest list of British Columbia incorporations. The company is in the promotion stage and has no plans for immediate development altho it has an option on some pulpwood limits.

Rainier Pulp Earns \$479,623

Altho the fiscal year ending April 30, 1930, began with an excellent bleached sulphite pulp market, it closed with the worst market in years. Despite these un-

favorable factors the Rainier Pulp & Paper Company, operating a 175-ton mill at Shelton, Washington, earned nearly a half million dollars during the twelve month. The mill, completed in June, 1927, is steadily improving its methods of manufacture looking toward the production of special pulps.

President E. M. Mills, in his letter to stockholders accompanying the annual statement, said the company made "extraordinary efforts to produce and find markets for pulp suited to special purposes and which would command better prices than the ordinary run of sulphite pulps". Plant improvements during the year accounted for almost \$300,000. Inventories at the end of the fiscal year amounted to \$555,000 as compared to \$120,000 at the beginning of the twelve-month. The less favorable current position of the company as against a year ago is attributed to the high inventory and capital expenditures.

RAINIER PULP & PAPER COMPANY BALANCE SHEET, April 30, 1930

ASSETS:	
Current:	
Cash	\$ 159,995.28
Acceptances	87,981.15
Accounts Receivable:	
Customers	\$ 335,862.41
Miscellaneous	26,134.79
	361,997.20
Merchandise Inventories:	
On hand as taken by employees of the company and valued at cost or market, whichever is the lower	\$ 291,694.23
On consignment with agents, priced at cost plus, freight, which is lower than market	264,011.65
	555,705.88
Total Current Assets	\$1,165,679.51
Plant and Equipment at Cost:	
Land	\$ 23,337.02
Buildings, Machinery and Equipment	\$3,037,664.46
Less Allowance for Depreciation	355,827.29
	2,681,837.17
Construction in Progress	34,796.33
	2,739,970.52
Contracts and Options	21,600.00
Investments	2,500.00
Deferred Charges to Operations	27,519.44
	\$3,957,269.47
LIABILITIES:	
Current:	
Payrolls and Compensation Insurance	\$ 17,971.96
Notes Payable to Banks	500,000.00
Accounts Payable	122,951.50
Accrued Expenses	39,300.32
Property Taxes, estimated	16,310.88
Provision for Federal Income Taxes	62,045.65
Total Current Liabilities	\$ 758,580.31
Capital:	
Capital Stock, common of no par value:	
Class A, 100,000 shares }	
Class B, 123,000 shares }	
	\$2,780,086.00
Paid-in Surplus	133,515.13
Earned Surplus, details annexed (subject to accrued dividends of \$33,333.33 on Class "A" stock not yet declared)	285,088.03
	3,198,689.16
	\$3,957,269.47

INCOME AND EARNED SURPLUS ACCOUNTS For the year ended April 30, 1930

Sales	\$2,300,925.88
Cost of Goods, Sold, exclusive of depreciation	1,613,946.56
Gross profit before depreciation	\$ 686,979.32
Less: Depreciation of plant	127,027.32
Profit from operations	\$ 559,952.00
Interest Paid, net of interest earned	18,828.82
Profit before Federal income taxes	\$ 541,123.18
Provision for Federal income taxes	61,500.00
Net profit for the year	\$ 479,623.18
Earned Surplus, May 1, 1929	\$219,525.67
Add: Excess of Federal income taxes provided for preceding year over amount paid	1,189.18
	220,714.85
	\$ 700,338.03
Deduct: Dividends paid on:	
Class A Stock	\$200,000.00
Class B Stock	215,250.00
	415,250.00
Balance earned surplus at April 30, 1930	\$ 285,088.03

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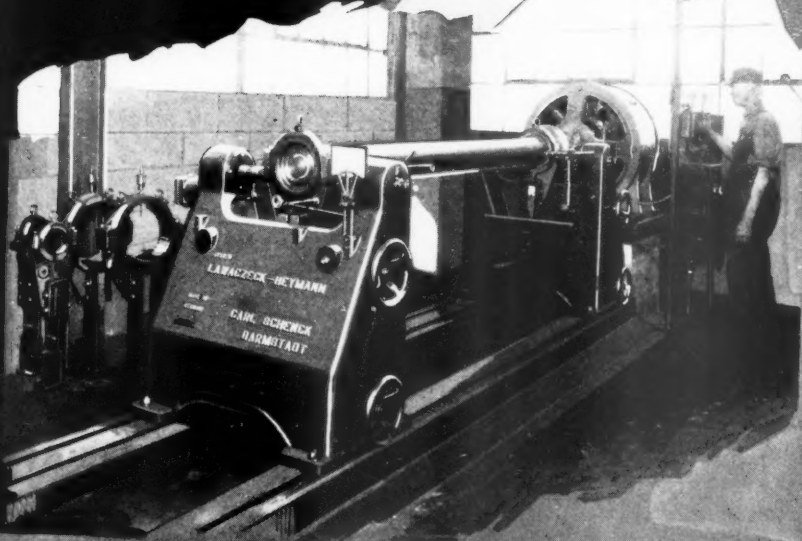
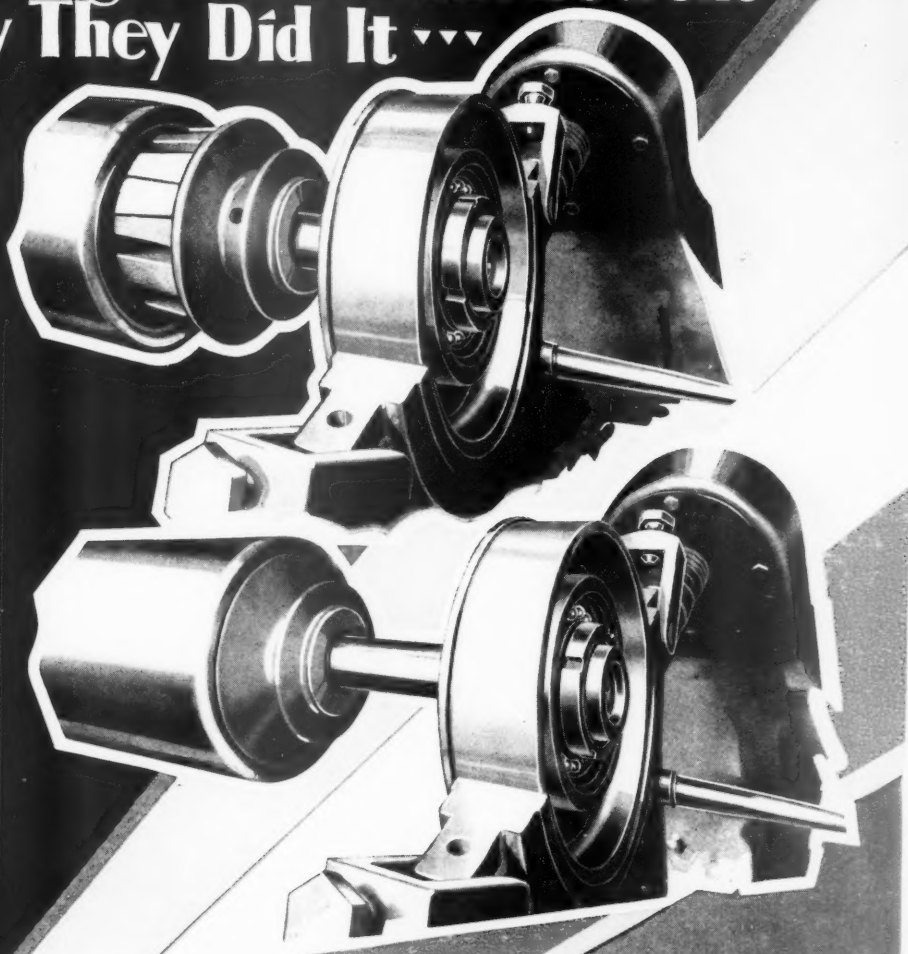
How BLACK-CLAWSON

Did The Thing That Couldn't Be Done And Why They Did It ...

AN out-of-balance roll pounds the bearings and gets out of level and out of line as the bearings give way. If it is a felt roll, the stretch of the felt becomes uneven, the whip too severe, and the life of the felt is shortened.

No, sir, your rolls are not in balance just because they have been balanced while standing still. Nine times out of ten they are far out of balance when running.

What of it? Just this. Black-Clawson balances their rolls both "still" and "running" at high speeds — have the only machine in the industry capable of determining the balance of a roll while it is turning 1000 R. P. M. — the only machine able to do what everybody said couldn't be done.



If interested, in longer bearing life and longer felt life, show some interest in how your rolls are balanced.

The April Messenger covers roll-balancing in fullest detail.

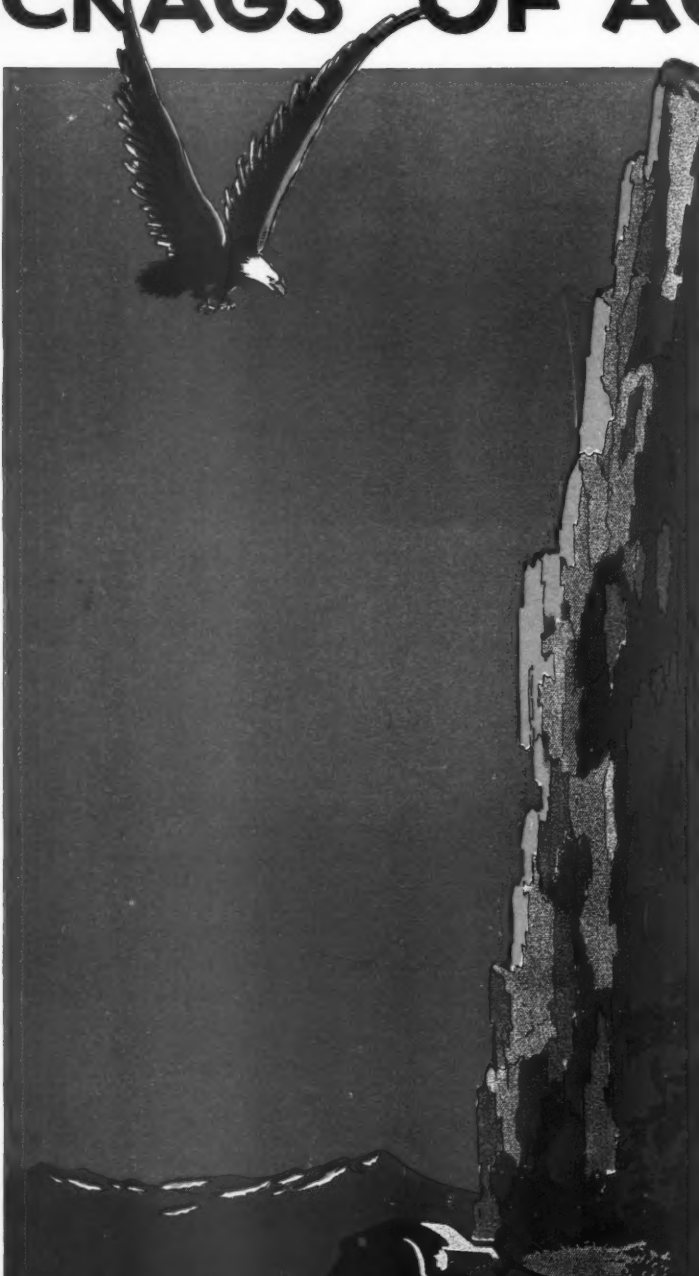
**The
Black-Clawson Co.**
HAMILTON, OHIO

Operating Shartle Bros. Machine Co.
Middletown, Ohio

Export Office, 15 Park Row, New York

BALANCE

SOARING TO THE UPPER CRAGS OF ACCEPTANCE



—the last **EIGHT** consecutive new mills to be built in the South have purchased Shartle Miami jordans **EXCLUSIVELY**.

70 TIMKEN BEARING MIAMIS

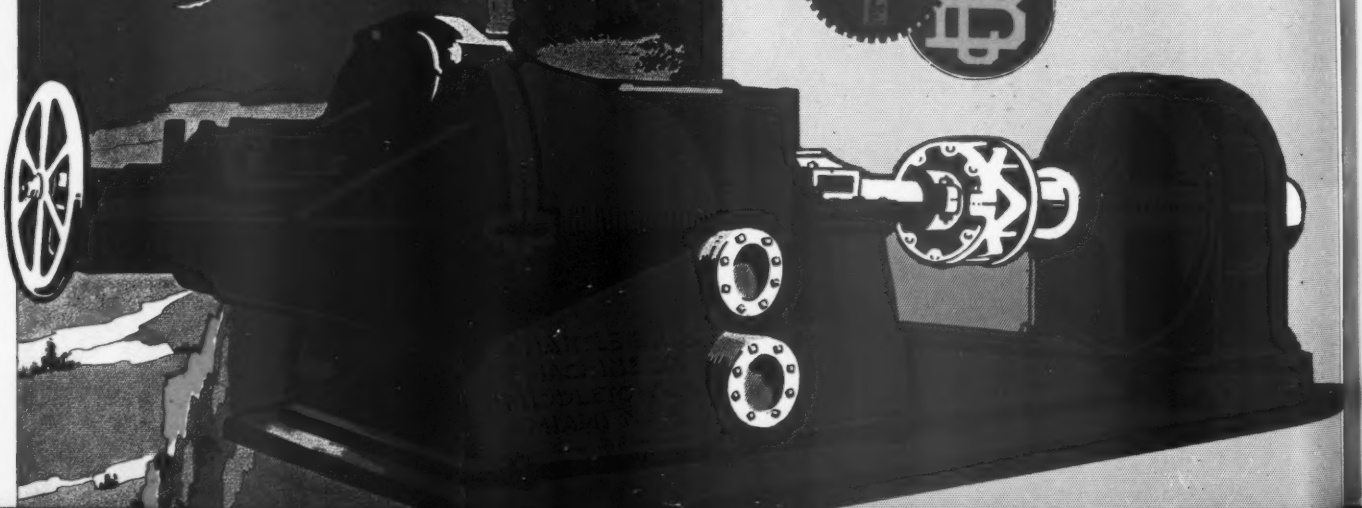
to refine the stock for the twelve newest machines in Dixie.

In 1917, all the mills in the South, on all grades, used a total of 61 Jordans. One of these, only, was a Miami. Today there are 45 Southern mills using a combined total of 289 jordans of all makes, 154 of which, are Shartle Miamis.

Shartle Bros. Machine Co.

Div. of The Black-Clawson Co., Hamilton, Ohio
MIDDLETOWN, OHIO

Export Office, 15 PARK ROW, NEW YORK CITY



Cascade Mill Still Unsold

The Cascade Paper Company of Tacoma, Washington, which went into receivership in May had not emerged from the meshes at last reports. D. J. Young, of the Bank of California, Tacoma, receiver for the Cascade mill, advertised the mill for sale. Originally the bids were to have been opened on June 17, but the sale was postponed. At this writing Mr. Young was in San Francisco, but a spokesman at the Tacoma bank confirmed that no sale had as yet been made. The Cascade mill has been in operation about 12 years. It is a two-machine soda pulp book mill with a daily capacity of 50 tons.

Crown Annual Earnings \$3,557,406

Consolidated net profits of Crown Willamette Paper Company, a subsidiary of Crown Zellerbach Corporation, aggregated \$3,557,406 for the fiscal year ended April 30, 1930, according to the annual report issued July 2. These earnings include the profits of Pacific Mills, Ltd., a Crown Willamette subsidiary and compare with consolidated earnings totaling \$3,754,056 for the previous fiscal year. Net available for Crown Willamette's preferred and common stock amounted to \$3,483,077 after deducting Pacific Mills, Ltd. dividends on preferred stock in the hands of the public and the minority common stockholders' interest.

Crown Willamette Paper Company's preferred dividends totaled \$1,646,000 for the last fiscal year. A common dividend of \$1,000,000 was also paid to Crown Zellerbach Corporation which owns all of the outstanding 1,000,000 shares of Crown Willamette common. The balance of \$837,077 was added to consolidated earned surplus after the payment of these dividends.

Detailed consolidated earnings statement of Crown Willamette Paper Company and its subsidiaries, including Pacific Mills, Ltd., for the year ended April 30, 1930, is as follows:

Profit before depreciation, depletion, bond interest and U. S. and Canadian Income Taxes.....	\$8,548,951
Depreciation	2,572,220
Depletion	686,771
Bond interest	1,368,417
U. S. and Canadian Income Taxes	364,137
Net profit	3,557,406
Minority stockholders interest	74,329
Preferred and common dividends	2,646,000
To surplus	837,077

Louis Bloch, president of Crown Willamette Paper Company and chairman of the Crown Zellerbach directorate, said, "During the year approximately \$6,000,000 was added to our investments in timberlands and plants, consisting principally of additions to the Camas and Ocean Falls plants. The major part of this work has been completed.

"Crown Willamette Paper Company bonds aggregating \$638,500 and Pacific Mills, Ltd., bonds in the amount of \$230,300 were redeemed and cancelled and \$204,000 was applied on account of deferred payments on timberland purchases. We have cut approximately 224,000,000 feet of timber and have acquired 531,000,000 so that our timber holdings have been increased by approximately 307,000,000 feet.

"The company's earnings have been well maintained notwithstanding disturbed operating conditions at the Camas and Ocean Falls mills during the construction work and the very unsatisfactory situation in the paper industry."

Balance sheet of the Crown Willamette Paper Company and its subsidiaries including Pacific Mills, Ltd., shows a good cash position as of April 30, 1930. Cur-

rent assets totaled \$10,155,295 against current liabilities of \$3,922,281, a ratio of 2.59 to 1.

Consolidated balance sheet of Crown Willamette Paper Company and its subsidiaries, including Pacific Mills, Ltd., is as follows:

April 30, 1930

ASSETS	
Cash	\$ 517,175
Notes receivable	41,658
Accounts receivable	3,081,021
Inventories	6,515,441
Total current assets	10,155,295
Investments	55,800
Sinking fund	421
Timberlands, etc., less depletion	30,054,264
Buildings and equipment less depreciation	30,448,921
Deferred charges	673,657
	\$71,388,358
LIABILITIES	
Accounts payable	\$ 2,633,300
Bond interest	433,098
Taxes accrued	831,569
Dividends payable	24,314
Total current liabilities	3,922,281
Crown Willamette 1st mortgage 6% gold bonds	18,303,000
Pacific Mills, Ltd. 1st mortgage 6% gold bonds	2,300,000
Subordinated mortgage 6% gold bonds	1,770,900
Timber notes payable 1931-1934	816,000
Reserves	138,806
Minority stockholders interest in Pacific Mills, Ltd.	1,529,521
Capital and surplus*	42,607,850
	\$71,388,358

* Represented by 200,000 shares no par value \$7 cumulative first preferred; 41,000 shares no par value \$6 cumulative second preferred and 1,000,000 shares of no par value common.

Crown Zellerbach Corporation, for the second fiscal year of unified operation ended April 30, 1930, reports net income of \$6,094,646, equivalent after preferred dividends of \$1,512,963 and minority stockholders interest totaling \$1,720,329, to \$1.43 per share on the 1,991,680 shares of common stock outstanding at the end of the period.

This compares with net income of \$6,379,412 earned in the fiscal year ended April 30, 1929, equal after preferred dividends and minority stockholders interest, to \$1.72 per share on the 1,991,608 outstanding common shares. Adjusted earnings for 1928 amounted to \$1.55 per share on the same basis.

Profit before depreciation, depletion, interest and taxes amounted to \$12,366,689 for the fiscal year ended April 30, 1930, an increase of \$316,696 over the \$12,049,993 for the preceding period. Deductions for depreciation increased \$640,219 and depletion \$85,582.

Balance sheet of Crown Zellerbach Corporation shows current assets of \$20,452,245 as against current liabilities of \$8,191,001, a ratio of approximately 2½ to 1. Assets totaled \$118,580,848 April 30, 1930 as against \$109,190,568 for the end of the previous year.

Sidney Roofing Plans Insulation Manufacture

The Sidney Roofing & Paper Company, Ltd., has under consideration for construction at some future time an addition to their plant at Victoria, B. C., to be used for the manufacture of a thick insulation board.

Managing Director Robert Mayhew has been conducting a number of experiments recently. He has shipped sample lots of wood to plants in the East and has thru this means developed an insulating board made of Western woods. The wood is put thru a chemical pulping process and afterward felted and pressed into a sheet of about one-half inch in thickness. The finished board has a long fine fibre and is a dark brown in color.

Some Views on the West Coast

Operating out of Chicago and with branches in many of the principal cities of the nation, James Flett conducts what he states is the largest waste paper business in the world. Mr. Flett has built up a service of accumulating and distributing waste paper that is somewhat unique. The owners of miscellaneous lots of waste paper dealing thru Mr. Flett retain title to their property thru to ultimate purchaser, but the Flett service builds these scattered lots of small tonnage into major shipments and gives the commodity some value.

The business naturally places Mr. Flett in touch with the paper and board industry all over the country. Mr. Flett travels extensively and a few months ago he spent a number of weeks looking into affairs here on the Pacific Coast. In response to a query from PACIFIC PULP AND PAPER INDUSTRY for impressions formed during this Coast visit Mr. Flett has written as follows:

"In regard to my impression of business on the West Coast I think that it is time that the West Coast manufacturers realized that the natural barrier created by the Rocky Mountains, which, for a great many years has kept other paper manufacturers and other sellers of paper and board products off the West Coast has disappeared.

"The present rapid steamship service via the Panama Canal with the attendant shortening of time for those wishing either to go to the West Coast or ship goods to the West Coast via water, plus the cutting of railroad schedules for passenger traffic and the speeding up of freight service has, not to mention the air transportation for passenger travel and mail service, have combined to place the West Coast in a position where the Eastern manufacturers and distributors of paper board and paper products, can look on the West Coast as a potential manufacturing center and a potential market for paper and paper products.

"It is unthinkable that over a period of time Eastern capital will not be attracted to as profitable a market for paper and paper products as the West Coast has proved to be over a period of time.

"No longer can the West Coast paper manufacturer feel that the West Coast belongs entirely to those now engaged in the paper business on the West Coast.

"It is my opinion that over a period of time increased manufacturing facilities not controlled by West Coast capital and increased sales distributions by Eastern manufacturers is going to create a situation on the West Coast where the paper business in its many ramifications, will be less profitable per ton unit than it has been in the past.

"This may give a slant on how I look at the situation and I think that the conditions that have arisen in the past few years have justified the premise that I have outlined above."

Looking Over Europe

K. O. Fosse, president of the International Wood & Sulphite Company, is now in Europe enjoying a tour of the old country lands which will cover a period of several weeks. Mr. Fosse is particularly interested in the Scandinavian countries.

Under the direction of Mr. Fosse the International Wood & Sulphite Company has built up a new industry on the Pacific Coast, that of salvaging the waste of sawmills and converting it to pulp chips and hogged fuel. The company now has about 15 such plants and is supplying regularly a number of pulp mills in the Puget Sound and Grays Harbor districts of Washington.

Cellulose From Sugar

A report was published recently quoting Harold Hibbert, of the Pulp and Paper Research Institute of Canada as announcing the discovery of a method of making cellulose from sugar. The manner of reporting the communication to the Canadian Chemical Association misinformed the reader to the extent that the process had reached that degree of commercial maturity where it might be considered as revolutionary, having as an effect the possible displacement of wood as a source of cellulose, particularly for such uses as rayon manufacture. Upon request Mr. Hibbert has clarified the statements made in the press in the following letter to PACIFIC PULP AND PAPER INDUSTRY:

"The communication made to the Canadian Chemical Association on the 'Synthesis of Cellulose from Sugar by Enzyme Action' has been very much distorted in the press.

"While it is apparently true that we are able to make cellulose from sugar, we have not as yet made rayon from the cellulose altho we are endeavoring to do so.

"In any event, I cannot see that there is likely to be any possibility of industrial development which would interfere with the use of wood pulp, altho naturally it never pays to be dogmatic on any such points.

"To avoid any further misconception, all future communications will be made thru the usual scientific journals as soon as results are available."

Schafer Brothers Provide Fuel

Schafer Brothers, mogul loggers and lumbermen in the Grays Harbor district, have installed a hog for producing hogged fuel at their Mill No. 1 at Montesano, Washington. The fuel will go to the Grays Harbor Pulp & Paper Company's 175-ton bleached sulphite pulp and paper mill at Hoquiam. Heretofore the Schafers have been burning this waste wood.

The Schafers have been the subject of much speculation in Southwestern Washington, Dame Rumor having built up a number of pulp mill projects around this organization, which, from the timber standpoint at least, is apparently well able to supply major wants for pulpwood. The Schafers, while never having officially stated they were interested in pulp, are said to have held a number of conferences with pulp mill engineers.

Tillamook Harbor Improvements Forecast Pulp

Possibility of another Western Oregon pulp mill is seen, with the announcement that the war department has allotted \$300,000 toward restoring and completing the Tillamook Bay jetty at Tillamook, Oregon. The allotment will be made during the next fiscal year, according to authorization made by army engineers last month. While the estimated cost of completing the jetty project is placed at \$672,000, it is thought that with the support of Tillamook Bay communities the amount will be sufficient to improve the entrance channel to the point where shipping will be made more feasible.

Lack of shipping facilities at that point is believed to have proved a deterrent factor in maturing plans for a pulp mill in the district. Nevertheless, it is said that at least two companies have done some preliminary work in the region.

Aside from expressing satisfaction over the action taken by the war department to improve the jetty, Portland engineers, who have been studying possibilities in that district, declined to make statements.

Crown Zellerbach Monopoly?

That Crown Zellerbach Corporation's control of the news print industry on the Pacific Coast is a subject for investigation by the Federal Trade Commission is one of the outstanding points brought out in the report of the commission made public on July 3 in answer to the Senate Resolution brought about some months ago calling for an investigation of the news print industry. Four points of major interest are included:

1. That no company selling news print in the Eastern part of the United States has enough of the total business to constitute a monopoly, altho Crown Zellerbach's acquisition of Crown Willamette Paper Company (with which goes control of Pacific Mills Ltd. in British Columbia), while in control of the Washington Pulp & Paper Corporation (wholly-owned subsidiary of the former Zellerbach Corporation), are "subject matters of a case now being further investigated by the commission."

2. No evidence of unlawful price discrimination against small publishers.

3. Newsprint Institute of Canada, if operating in United States, would be in violation of anti-trust laws. Congress warned to keep tab on any similar agency springing up in the United States, altho none known to exist at this time.

4. Commission recommends small publishers to form purchasing organizations to get advantage of contract prices on quantity.

Crown Zellerbach was shown to control 15% of the United States news print production. Great Northern Paper Company produces 22%; International Paper Company, 11.7%. In addition, Crown Zellerbach, thru Pacific Mills Ltd., accounts for 2.6% of the Canadian production.

Touching upon the possibilities of production of news print in Alaska, which, with the recent requests made by the Zellerbach and Cameron interests for final permits to develop two 80,000 HP hydro-electric projects to feed Alaskan paper mills, is now currently pertinent, the Commission's report said:

"It may be noted that if Alaska news print can be delivered to New Orleans thru the Panama Canal at \$58 a ton, it can be sold in Cincinnati and even in Chicago at \$64.60 a ton. The current delivered price in these two cities is \$62.00. The increase proposed by the governments of the Provinces of Quebec and Ontario would establish a price of \$67 a ton, giving Alaskan paper an advantage."

Promal—A New Metal for Chains

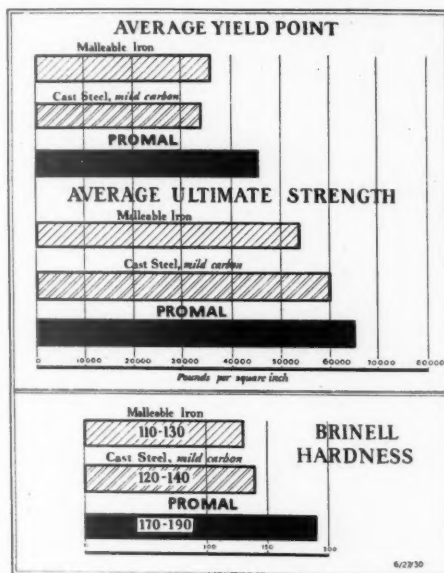
A new line of cast chains showing remarkable strength and durability in comparison with malleable chains has been placed on the market by Link-Belt Company, Indianapolis. These chains are sold under the registered trade name of PROMAL. The announcement is of pertinent interest to pulp and paper mills where conveyor chains are extensively used, particularly in handling wood and fuel.

They are the result of extended research to provide longer life for drive and conveyor chains operating under heavy loads or abrasive conditions. Experimentation with cast chain metals, started about four years ago, led to the discovery of a new method of processing malleable iron which so altered its physical characteristics as to make it a distinctly new metal. This fact was recognized by giving it the distinctive name of PROMAL.

Compared with malleable iron, the Link-Belt Com-

pany points out, PROMAL has an average yield point of 45,000 lbs. as against 36,000 lbs.; an average ultimate strength of 65,000 lbs. as against 54,000 lbs.; an average elongation of 14% as against 18%, and a Brinell hardness of 170-190 as against 110-130. Compared with mild cast steel, annealed, PROMAL has an average yield point of 45,000 lbs. as against 34,000 lbs.; an average ultimate strength of 65,000 lbs. as against 60,000 lbs.; an average elongation of 14% as against 26%; and a Brinell hardness of 170-190 as against 120-140.

PROMAL thus has to a high degree the qualities desirable in sprocket chain material; great toughness to



resist extreme tension without permanent stretch; high strength in proportion to weight and size; and hardness that affords great resistance to abrasive wear. The combination of these characteristics in the new metal gives chains made of it their surprising durability.

Altho laboratory tests indicated the better wearing qualities of PROMAL chains when they were first developed, they were withheld from the open market for over three years to permit extensive field tests. For these tests, many chains were tried out in various industries thru the cooperation of Link-Belt customers. A check was then kept on the performance of PROMAL chains while subjected to every-day usage. The results have uniformly substantiated the laboratory tests.

Amalgamation of Canadian Newsprint Mills

What it is claimed will be the largest newsprint manufacturing corporation in the British Empire came into being recently as a result of the amalgamation of the Canada Power & Paper Corporation and the Anglo-Canadian Pulp & Paper Mills Ltd.

The former corporation acquired control last autumn of the Wayagamack and the Port Alfred organizations. With the present amalgamation, six mills in the Province of Quebec will be brought under the control of one company, five of them being in close proximity. The Canada Power and Paper Corporation is controlled by the Holt-Gundy interests, while the Anglo-Canadian Pulp and Paper Mills Ltd. is controlled by the Rothe-mere interests.



Where Fancy Figures Fall Down

Putting performance on parade may be good practice for some classes of equipment. But for others — paper mill ventilating apparatus in particular — performance means little without full consideration of the conditions that made such performance possible. Savings shown from one installation operating under most favorable circumstances would be impossible to secure on the same installation operating under less favorable conditions. Fancy figures on performance fall down in the face of other factors that determine the

consistent efficiency of any method of ventilating. Mill managers prefer to face the facts and forget the figure when they pertain to a single installation that can in no way be considered typical.

• • • • •

Ross Systems for ventilating are recognized as the most practical, efficient and economical method available. When conditions are compared, no other method has yet been found that produces equally advantageous results.

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ROSS SYSTEMS

HEATING—VENTILATING—DRYING

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T - A - P - P - I

Pacific Coast Section

Chairman—R. S. WERTHEIMER
Longview Fibre Co., Longview, Washington

Vice Chairman—RALPH REID
St. Helens Pulp & Paper Co., St. Helens, Oregon

Secretary—H. K. BENSON
University of Washington, Seattle

New TAPPI Member

National Secretary R. G. Macdonald reports the newest member of TAPPI on the Pacific Coast as Carl E. Braun of the Puget Sound Pulp & Timber Company. Mr. Braun was with the Crown Willamette Paper Company several years ago, after which service he was with the mills controlled by F. W. Leadbetter. He was general manager of all the Leadbetter mills just before joining his present company.

Western Men on TAPPI Committees

Plans for the regular fall meeting of the Pacific section of TAPPI at Portland are progressing. The date has not been finally fixed but Saturday, October 4, is presently looked upon with favor.

Prospects are good that B. W. Scribner, chief of the paper section, U. S. Bureau of Standards, will be in attendance from Washington, D. C., to discuss the work of his bureau with respect to the pulp and paper industry.

A part of the Portland meeting will be given over to reports on the several national committees of TAPPI, on a majority of which the Pacific section is represented. These Pacific Coast committeemen will inform themselves of the work and program of their respective committees and report at the Portland meeting. It has been the idea of the Pacific section to cooperate closely with the national groups and it is expected that following the several reports that sub-committees will be formed within the Pacific section, built around the Pacific representatives.

Following is a list of Pacific Coast TAPPI members and the committees on which they are serving:

Education—M. W. Black, Inland Empire Paper Company.

Management Methods—Max Oberdorfer, St. Helens Pulp & Paper Co.

Patents—C. W. Morden, Portland.

Heat and Power—D. E. Cousins, Union Bag & Paper Power Corp.

Fibrous Materials—L. Friedman, University of Ore.

Preparation of Materials—W. E. Breitenbach, Grays Harbor Pulp & Paper Co.

Mechanical Pulping—E. P. Ketchum, Powell River Company, Ltd.

Alkaline Pulping—Ralph Reid, St. Helens Pulp & Paper Co. and R. S. Wertheimer, Longview Fibre Co.

Acid Pulping—Sigurd Norman, Spaulding Pulp & Paper Co.

Paper Manufacture—B. T. McBain.

Wood Testing—W. R. Benson, National Paper Products Co., and R. H. Scanlon, Powell River Company Ltd.

Paper Testing—C. R. P. Cash, Cascade Paper Co.

Pulp Testing—H. K. Benson, University of Washington.

Contributions of

COLLOID CHEMISTRY

to the

Pulp and Paper Industry

By DR. LEO FRIEDMAN

Department of Chemistry, University of Oregon

COLLOID chemistry can be defined as that branch of chemistry which deals with systems in which the surface is the most important factor in determining the properties.

Since most of the properties of paper are due to its surface characteristics and the surface characteristics of the particles of pulp, clay and size which go to make it up, paper is an almost ideal example of a colloidal system. To study paper is to study surface properties. In addition, the fact must not be overlooked that the biggest constituent of paper is a jelly: i. e., pulp.

Possibly the title of this paper should be a little different, for in looking over the field, I find that the young science has not contributed a great deal yet, but I am enthusiastic about the possibilities during the next ten years. In the following discussion book paper is considered primarily, tho the applications go over into the manufacture of all kinds of paper.

Book paper consists of sulfite pulp (bleached or unbleached), ground wood or soda pulp, clay, or other filler such as chalk or heavy spar, and usually some rosin or silicate size. I shall discuss briefly the constituents that make up this paper and the part that colloidal study can play in this treatment.

Sulfite Pulp

Sulfite of course is made by cooking the chips with a solution of calcium hydroxide, sulfur dioxide and water, and the resulting mixture of compounds and ions. When it first comes from the digester, it contains a small amount of lignin compounds which give it considerable brown color and influence its properties to a considerable extent.

This pulp is rather opaque, quite strong, and has some other desirable properties in the making of paper, but it usually does not take rosin size very well. At any rate it does not take rosin size uniformly.

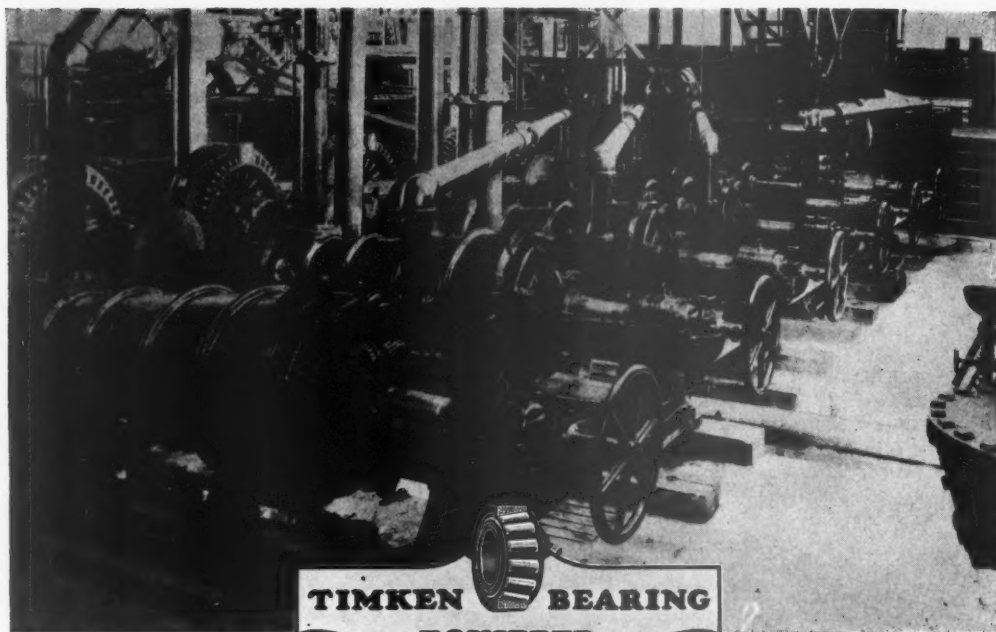
Why this characteristic exists is not certain, but it is quite probably due to low absorbing properties of the lignin or to a layer of pitch which is not efficiently removed in the sulphite process. Bleaching to remove the lignin or treating the pulp to remove the pitch makes a decided difference in the tendency of the pulp to take rosin size.

Hydration of Pulp

Studies of the surface properties of the pulp such as heat of wetting or heat of swelling of the pulp in water or absorption of anions and cations from water

(Turn to page 47)

This is an abstract of a paper given by Dr. Friedman at the first Spring meeting of the Pacific Coast Section of TAPPI, Longview, Washington, April 5, 1930.



Timken - Equipped Emerson Jordans Keep Costs Down - Quality Up

About a year ago a New England Mill, manufacturers of high grade Kraft paper, installed a battery of six Emerson Jordan engines to take care of increased production.

On the recommendation of the builders, The Emerson Manufacturing Company, Lawrence, Mass., these Jordans were Timken Bearing Equipped in order to save power and lubricant and assure uninterrupted service. Costs were to be cut, but quality was to be jealously guarded.

After a year of steady operation, Timken Bearings have more than justified the judgment of the builders of the Jordans, and the confidence of the user. They have reduced the power consumption, lengthened the service obtained

from the filling and, by permanently holding the plug in exact alignment with the shell, they have made possible a more uniform treatment of the stock than can be obtained with plain-bearing Jordans, thus not only maintaining, but actually improving the quality of the paper.

In the years to come, these Timken benefits will take on added value as maintenance costs are slashed and machine life prolonged by the exclusive radial-thrust carrying combination of Timken tapered construction, Timken positively aligned rolls and Timken-made steel—the only combination that meets every modern anti-friction requirement in Jordans, paper-making machines, Fourdriniers and other types of paper mill machinery.

THE TIMKEN ROLLER BEARING COMPANY, CANTON, OHIO

TIMKEN *Tapered Roller* **BEARINGS**

When writing THE TIMKEN ROLLER BEARING CO., please mention PACIFIC PULP AND PAPER INDUSTRY.

Colloid Chemistry

(Continued from page 45)

solution and the conditions of H^+ ion concentration which influence the absorption of these ions by the surface of this pulp may serve as a means of characterizing the pulp prior to the time the pulp is to be used.

The heat of wetting and heat of swelling of pulp are probably closely related with the tendency of the pulps to hydrate in the beater. A knowledge of the heat of swelling of the pulp prior to the time the pulp is to be used would probably give one an index as to the treatment the pulp might be given, such as with a rod mill or pre-beater, prior to the time it is put into the beater to be mixed with other constituents of the paper. If the pulp is slow to hydrate it could be treated more drastically than a pulp, possibly from the next cook, which was easy to hydrate.

Clay

The finish of paper is to a large extent due to the character of the clay used as filler. This is probably more important in this characteristic than the ground wood. It also has a pronounced influence upon opacity of the sheet. It also has a very important influence upon the life of the machine wire and the surface of the suction flat boxes.

The finish obtained with a certain clay depends to a considerable extent upon the moisture in the sheet at the time of supercalendering. In a dry sheet it is chalky and powdery. In a sheet which is too wet the supercalenders form transparent spots or cause blackening of the sheet. The surface moisture of the clay apparently determines whether the clay is going to pack under the pressure of the supercalender rolls to give a spot with no air spaces between the clay and fiber particles or whether the other extreme is to be obtained in which the particles do not stick together.

Retention of clay on the machine is largely a colloidal phenomenon. It is for the most part dependent upon the flocculation of alum or aluminum hydroxide. I am satisfied that it is not so much a matter of ionic behavior. It matters little whether the pulp is negative or positive or whether the clay is negative or positive. It is almost entirely a matter of whether or not the alum is hydrolyzed and the aluminum hydroxide flocculated. If the latter is flocculated in the presence of the clay the clay is going to be occluded in it. If this flocculation action is completed before the stock goes onto the wire, but not so far before it goes onto the wire as to have the flocculate torn to pieces by violent treatment such as in jordan and high speed centrifugal pumps, the best retention of clay will be obtained. It is better to have the flocculation take place on the acid side of the pH 5.5 than on the alkaline side, for the sheet is more free and the white water formed from the stock is more readily settled.

Sizing

Sizing is largely a colloidal phenomenon. The desirable condition in sizing is that of obtaining a uniform coating of the sizing material on the outside of the clay and fiber. One must be sure that the size has time to be uniformly and thoroly dispersed thru the paper stock before the alum is added. To accomplish this the stock in the beater must be above pH 7.0 during the time the size is being added. If it is below 6.0 the size will curdle at the time it is added. This curdled size is largely wasted, for tho it may be retained in the sheet it has little or no influence upon the properties of particles of clay and fiber, except

a few which happen to be on its surface. A few pounds of size properly dispersed in the stock before being set is of more value than ten times this amount of size which has not been uniformly dispersed through the stock.

Some pulps size readily while others do not. This problem is a difficult one, but I am convinced that the solution lies in a knowledge of the surface condition of the fiber and in a knowledge of the conditions for setting the size.

Possibly the mixing of the rosin size with water glass, which is sometimes used as a size, will be an aid to improving sizing. It should do two things. It should insure an alkaline stock at the time the size is brought into contact with the stock and it should serve as a gel to assist in retaining the size in a fine degree of subdivision on the surface of the fiber. It should also improve the retention of the clay, and it should give the paper a desirable rattle.

Of course the use of this should be carefully worked out, for the addition of too much or the addition of the right amount in the wrong way might lead to very unsatisfactory results.

Pitch Trouble

Pitch trouble is closely associated with sizing troubles. It is not definitely known whether the so-called pitch which collects on the paper machine comes from the wood or is largely the rosin from the size. Certainly most trouble occurs when there is sizing trouble. Which is the cause and which the effect is hard to say, but it is surely a colloidal problem. It strikes me that it will come from either improving or altering the cooking process or pre-treatment of pulp so as to decrease the amount of pitch in the pulp, or to determine the proper conditions for setting the size. Possibly it will be a combination of both.

White Water Recovery

The recovery of suspended matter in white water and the clarification of water coming into the plant is a colloidal problem. This has been largely solved by the application of colloids to the study of the flocculation of aluminum hydroxide. The optimum flocculation of aluminum hydroxide is at pH 5.5. At this pH value the residual alum in solution is hardly detectable. The aluminum hydroxide in flocculating catches suspended clay and other relative coarse suspensions and drags them together in the flocculate. Regulation of the acidity of the system to give this pH gives the best results in the removal of coarse suspended matter. Coloring matter, however, or other highly dispersed material with a negative charge is not so easily caught in the flocculate. It must be adsorbed. The clay and coarse suspended matter is too large to be much influenced by adsorption. The adsorption of these negatively charged dispersions is influenced to a marked extent by the pH.

At low pH values the adsorption of negatively charged ions and colloiddally dispersed substances is higher than at higher pH values. Hence, if a river water contains yellow coloring matter from the swamps the removal is accomplished at pH 5.5 or 5.0 much more effectively, than at pH 7.0 even though the volume of flocculate formed is not so markedly different. It is only recently that some of the leading water works chemists have come to realize this.

I have merely tried to point out a few of the things that knowledge of colloid chemistry has done and to enumerate problems which are awaiting solution thru application of its principles.



Salesmen's Maxim ★
No. 2

An authority is one who is an inveterate student

THE salesman who really knows the several hundred kinds of printing papers comprising the modern Paper Dealer's stock must be ever a student.

Paper making is a science as well as an art and no one manufacturer knows how or attempts to make all of the varieties.

Each is different from the other and requires a particular knowledge, skill and equipment acquired only through a life-time of study, experiment and experience.

It has been said that "all men are bluffers".

This is frequently true in a measure, particularly of men buying or using a variety of such a technical commodity as printing papers.

They must of necessity rely frequently upon the specialized knowledge and judgment of the salesman who serves them.

Who serves me well may serve me often.

The day of the salesman who carried "a good front" has passed.

An intelligent curiosity and the industry to satisfy it are characteristics of the paper salesman who would be an "authority" and consequently successful.

Everett Book and Printing Papers are a fruitful field for study and will reward your effort.

In every ream is the applied knowledge of that paper's requirements.

There is a world of meaning in the slogan "Rely on Everett".

If you would interpret it intelligently and completely you must be an "authority".

We will be glad to help you. (In confidence, of course.)

*A coined word, combining:

Maxim—a rule or precept sanctioned by experience and relating especially to the practical concerns of life.
Axiom—an established principle in some art or science.



EVERETT PULP AND PAPER CO.

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Sales Offices: 244 California Street, San Francisco 802 Washington Bldg., Los Angeles

T-R-A-D-E - T-A-L-K

Devoted to the Paper Trade of the Western States

Appoints Mill Relations Committee

E. A. Doran, Blake, Moffitt & Towne, San Francisco, president of the Pacific States Paper Trade Association, has appointed the mills relations committee of the association prior to the formation of the other committees in order that it can begin functioning immediately. The members of the mills relations committee are as follow: Mason Olmsted, Zellerbach Paper Company, chairman; E. A. Doran; H. S. Bonestell, Bonestell Paper Company; W. B. Reynolds, General Paper Company, and T. A. O'Keefe, Pacific Coast Paper Company. The other committees will be announced in a short time.

B., M. & T. Opens Yakima Branch

Blake, Moffitt & Towne, pioneer wholesale paper house of the Pacific Coast, will open a new division at Yakima, Washington, heart of the famous fruit country, according to an announcement made recently by O. W. Mielke, head of Blake, Moffitt & Towne interests in the Pacific Northwest.

In charge of the new division, which will be the seventeenth in the wholesale distributing chain of the company, will be John M. Darnell, who has been the company's representative in this section for the past eight years. The office and a warehouse is centrally located at 107-109 South Second Street, and work has started on necessary alterations.

Opens New San Francisco Office

Edward N. Smith, representing the Tuttle Press Company, the Crystal Tissue Company, Rhinelander Paper Company and Western Advance Bag & Paper Company, Inc., with offices in the Insurance Exchange Building, Los Angeles, California, has opened a San Francisco office at 190 Lombard Street, and will carry warehouse stocks in the Dodd Warehouse for the convenience of the Northern California trade.

This office is under the management of Ralph F. Reid, formerly with the Union Bag & Paper Company, and more recently Southern California district manager for the Graham Paper Company.

O'Keefe and Tompkins Visit Chicago

Thomas A. O'Keefe, manager of the San Francisco division Butler Paper Company and manager of the Pacific Coast Paper Company, attended the annual meeting of division managers of the Butler Paper Company, Chicago, recently. Mr. O'Keefe flew as far as Omaha, Nebraska, when the plane was forced down on account of bad weather.

George I. Tompkins, manager of the Sierra Paper Company, Los Angeles, and manager of the Butler Paper Company in that territory, also attended the Butler meeting in Chicago.

E. W. Buckley, for a number of years manager of the General Paper Company, Los Angeles, and before that of the Western Pacific Paper Company, has retired, and returned East where he expects to effect a mill connection.

EUGENE A. BREYMAN

General
Operating Manager
of the
ZELLERBACH
PAPER COMPANY
recently elected
Vice-President



BM&T In New Oakland Branch

F. L. Unthank, long with the coast-wide paper jobbing organization of Blake, Moffitt & Towne, and in charge of the Oakland division since its establishment several years ago, moved his staff and merchandise into a fine new building last month at Sixth and Webster Streets. The new division provides 35 percent more floor space and has been especially designed for paper wholesaling. Built of reinforced concrete and finished in brick, the two-story building cost approximately \$75,000.

The move comes with the celebration of the seventy-fifth anniversary of the founding of the house of Blake, Moffitt & Towne. From that beginning in 1855 the organization has expanded until it now has distributing branches in Los Angeles, Seattle, Portland, Tacoma, Sacramento, San Jose, San Diego, Long Beach, Boise, Salem, Medford, Tucson and Phoenix.

Napco to Market New Paper Towel

National Paper Products Company, with offices in San Francisco, Seattle, Denver and Los Angeles, L. J. Arms, sales manager of the Western division, is putting on the market a new improved paper towel.

This new Public Service towel is made of 100% bleached sulphite stock, and has several times the absorption power of the average sulphite towel, it is claimed. The towel has a soft finish and the necessary strength to prevent tearing given by a special padded hem. The towel is being sold at moderate prices which insure wide distribution through leading jobbers throughout the Western states.

L. J. Arms Gets Modess Contract

L. J. Arms, sales manager of the Sanitary Products Corporation, Western division, with headquarters in San Francisco, has signed a contract which secures the selling agency to the jobbing trade in the eleven Western states of Modess sanitary napkins, vending machine type.

Satisfactory Service!
at Your Command

PAPER MILL MACHINERY

For Your Particular Requirements

The Undercut Trimmer

An Automatic Clamping Cutter, conceded the BEST Trimmer for THE PAPER MILL, replacing other makes of cutters where accuracy and strength are a factor in efficient production with minimum cost of maintenance. Equipped with motor or pulley drive, and safety starting device as desired.

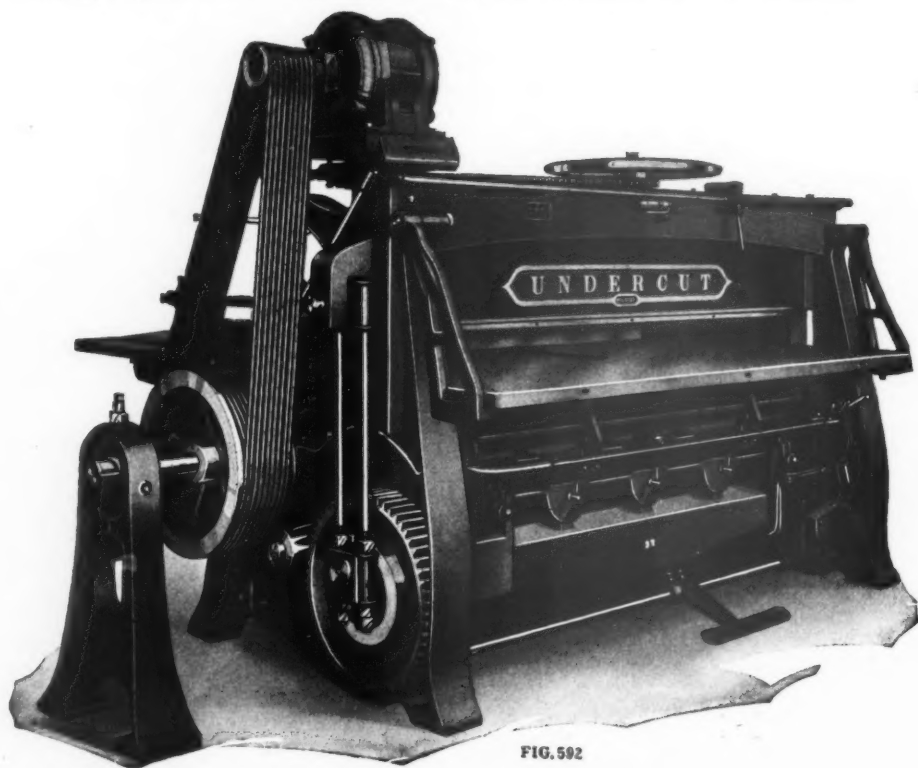


FIG. 592

THE SMITH & WINCHESTER MFG. CO.

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— PAPER BAG MAKING MACHINERY —

When writing to SMITH & WINCHESTER MFG. Co. please mention PACIFIC PULP AND PAPER INDUSTRY

**New Types
New Models
New Machines**

EQUIPMENT

Manufacturers of, and dealers in, equipment used by pulp and paper mills, board manufacturers, converting plants, paper merchants, or any other branch of the industry may make their announcements in this department.

**New Dealers
New Branches
Appointments**

Crane—Seventy-Five Years

A 23-year-old mechanic named R. T. Crane set up a little brass and bell foundry business in a corner of his uncle's lumber yard back in Chicago on July 4, 1855. That was the start of Crane Company, the 75th anniversary of the founding of which is celebrated this month by 85,000 people in all corners of the earth, employes and direct dependents of Crane Company. Here, gentlemen, is a book length novel of American enterprise and industry in a paragraph.

Young Crane established and built his business upon the following creed:

"I am resolved to conduct my business in the strictest honesty and fairness; to avoid all deception and trickery; to deal fairly with both customers and competitors; to be liberal and just toward employes and to put my whole mind on the business."

Crane developments have wrought important changes in the domestic and industrial life of the people. From crude valves and fittings the field of endeavor has been expanded to meet the increasingly perplexing problems of today where high pressures and temperatures, corrosion, great size and other factors have injected themselves for solution before progress could continue.

The pulp and paper industry needs no introduction to Crane Company. Its pipe and fittings control the waters of the hills rushing down from hillside to turn generators or wash stock. Crane is found in the boiler house, controlling the stock chests, carrying acids and alkalis, distributing gases and fluids.

The full tale of Crane contributions to many industries would be endless. Crane valves and fittings, and the research that started with that young mechanic back in 1855 in metallurgy and piping metals, have effected virtually every industrial process of the present day.

American Wringer Executive on Coast

William E. Brown of the American Wringer Company, makers and recoverers of rubber rolls for paper machines, was a visitor to the Coast region in recent weeks. He visited most of the Pacific Coast mills in the company of Walter S. Hodges of Portland, who represents the company on the Pacific Coast.

A trip to the Coast's most northerly mill, Pacific Mills, Ltd., at Ocean Falls, B. C., was included in the itinerary, as well as a jaunt to California points. Mr. Brown had not been on the Coast for three years, and found on this visit that a great deal of new construction had taken place since his last trip west.

Ryther & Pringle Has New Executives

At a meeting of the directors of the Ryther & Pringle Company, iron founders and machinists of Carthage, New York, on June 20, D. W. Sarvay was elected president to succeed the late George D. Ryther. William M. Fox was elected vice-president and Thomas C. Lynch was elected secretary-treasurer. Mr. Sarvay will continue as general manager. No radical change of policy is contemplated.

Top Press Rolls of Rubber

The Griffith Rubber Mills of Portland are experiencing considerable success with installations of their rubber top press rolls, according to U. A. Keppinger of that organization. The roll was developed by Griffith, Mr. Keppinger states, and supplants the old style granite rolls. The granite rolls were said to be hard on the felts due to their rigidity and great weight.

Among the installations of this roll the Griffith Rubber Mills now number a total of five at the Camas, Washington, mill of the Crown Willamette Paper Company, nine at that company's West Linn, Oregon, mill, one on the big machine at the Salem, Oregon, mill of the Oregon Pulp & Paper Company, and others.

Mr. Keppinger reports a steady business apparently unaffected by the rather general conditions of subnormal business in most lines.

General Dyestuff Corporation Changes

Colonel Herman A. Metz is now chairman of the board of directors of General Dyestuff Corporation, and Ernest K. Halbach has assumed the presidency of the company.

Colonel Metz has been identified with the dye-stuff industry through many years of important achievement. As chairman, G. D. C. will continue to reap the full value of his outstanding ability and experience.

A Bingham Pump On This Job

Having found difficulty in securing the right pump to provide their main mill supply of clear water from a number of sand point wells they had driven, the Pacific Straw Paper & Board Company of Longview, Washington, called in an engineer from the Bingham Pump Company of Portland, states President R. V. Bingham of that company, with the result that a new pump was designed and installed which has performed creditably on the job.

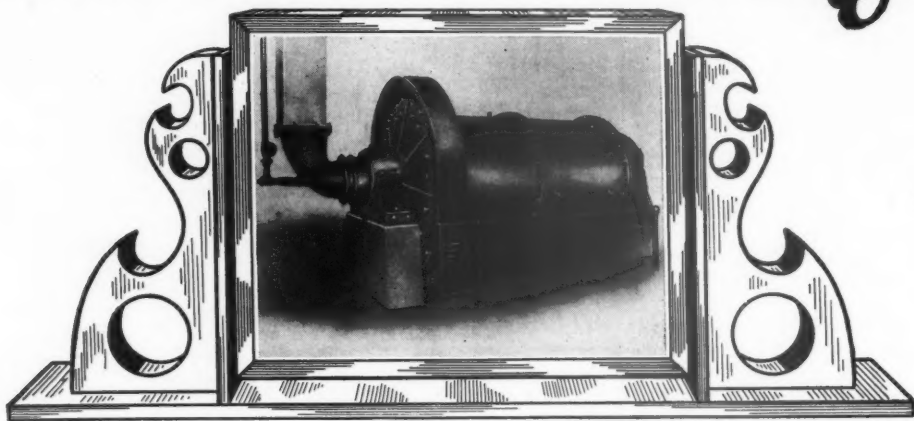
The new pump delivers 1,800 gallons per minute, maintaining a vacuum of 26 inches on the intake and delivering at 65 pounds pressure on the discharge side. Mr. Bingham states that the pump is operating at 85 percent efficiency under these unusual conditions.

In Praise of Paper

The Eastwood Wire Corporation of Belleville, New Jersey, has issued an unusually fine printment entitled "In Praise of Paper". It is printed on an American-made vegetable parchment and the type treatment is reminiscent of the parchment missals used in bygone centuries. "In Praise of Paper" is the first of a series, Eastwood's general manager, Harry G. Specht, announces. Each in the series will be devoted to some phase of the great business of paper making.

The Los Angeles Paper Box Factory is building a new plant at 2615 Pitt Street, Los Angeles, at a cost of \$100,000.

For Beating Ground Wood Screenings



PAPER MILLS specializing in the manufacture of newsprint, white cardboard, pie plates, butter cartons, etc., will find the Marcy Rod Mill a revelation in handling ground wood screenings.

The beating action of the rods will convert these screenings into regular ground wood pulp suitable for your major product. The pulp produced in the Marcy Mill is a fibrous pulp and not wood flour.

You can accomplish this result with a Marcy Rod Mill with a power consumption of about 10 H. P. per ton per day. Besides this, the Marcy Rod Mill will enable you to close up your present ground wood system.

Submit your beating problems to our engineers and they will show you how you can utilize your waste, improve your product and reduce your power consumption per ton. Ask for *Bulletin No. 75*—"Beating and Refining with the Marcy Open End Rod Mill."

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+ PAPER CONVERTER +

A department for those who start where the paper machine leaves off
and who create new values for the paper industry thru remanufacturing

Consolidated Sells—New Company Organized

At a special meeting of stockholders on June 14 the Consolidated Paper Box Company was authorized to sell the First Street, or "B", plant, to Louis E. Raisin and Louis A. Thiebaut. The plant is equipped to manufacture candy boxes. The purchasers paid for the plant in debentures of \$135,000 par value, which it is said were purchased by them for \$81,000. In addition \$15,000 in cash was paid.

The purchasers have formed a new company to be known as Raisin & Thiebaut, Ltd., and will continue the manufacture of candy boxes. The new owners come from formerly competitive firms, Raisin & Zaruba and Thiebaut Brothers.

President R. J. Gruenberg of Consolidated states that the sale places the company in a stronger cash position and increases its net worth by \$56,000.

The Consolidated Paper Box Company was the result of an extensive merger of paper box plants in the San Francisco Bay district in 1928. The merger was followed by the issuing of new securities, the dismantling of some obsolete plants and the consolidation of others.

Longview Fibre Begins Making Containers

The Longview Fibre Company in June turned over the wheels in its new container plant. Manager R. S. Wertheimer had scheduled the first of production of solid fibre containers for June 15 and the manufacture of corrugated boxes was to start about two weeks later. The new department is built adjoining the finishing room of the paper mill.

Completion of the container division broadens the activities of the Longview mill to a degree considerably in advance of that acquired upon completion of the original structure in the fall of 1927. The first structure included a 120-ton sulphate pulp mill and a cylinder board machine with vertical dryer. Shortly after a Yankee type paper machine was added and still later the company constructed its own groundwood pulp mill where it is now successfully grinding Douglas fir.

Charles Schaub Founds New Company

The Paper Board & Converting Company was incorporated under the laws of Washington in June by Charles F. Schaub, F. B. Mitchell and H. A. Hollopeter. Mr. Schaub is the president of the Pacific Straw Paper & Board Company of Longview, Washington, manufacturers of box board. The other men are from Portland. Upon query regarding the plans of the new company Mr. Schaub said, "We merely contemplate a small activity for this company later on, but cannot say what just now since it is just in the making."

To Wax Paper In All Seasons

The paper waxing and printing plant of the Salinas Valley Wax Paper Co. at Spreckels, near Salinas, prob-

ably will be operated the entire year round, instead of only during the vegetable season, as in the past. T. G. Emmons and Charles Goetz, owners of the plant, also operate the Arizona Wax Paper Co. plant at Benson, Arizona, and print the output of both plants at Spreckels, where a printing press was installed this year. The Arizona plant closed May 24 for the season.

May Expand Converting Plant

Rumored immediate expansion of the Western Paper Converting Company's Salem, Oregon, plant was confirmed in part early this month by A. B. Galloway, manager, who recently returned from a six weeks' eastern business trip.

"Our plans for expansion are coming along nicely and we'll probably be ready to release something for publication within the next thirty days."

Packer Buys Seattle Branch

C. M. Packer, president of the Packer-Scott Company, Portland and Seattle, has purchased the company's interests in the Seattle house from V. C. Scott and Arthur D. Hosfeldt. Mr. Packer will devote all his time to the active management of the latter branch, which will be continued under the same name. Ownership and management of the Portland house will hereafter be in the hands of Mr. Scott and Mr. Hosfeldt. Negotiations were concluded early in July.

Commenting on the change, Mr. Scott pointed out that business at the Seattle branch, established a year ago at 1232 Sixth Avenue South, has grown to the point where personal management is necessary.

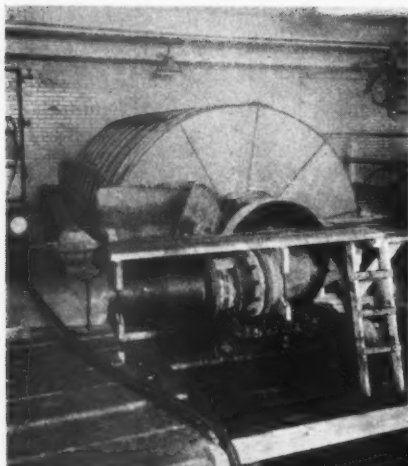
"Altho the two units will be separate and distinct, we will continue to work in conjunction," Mr. Scott said. "Besides buying jointly, we plan to shape our policies so that each house will benefit the same as under one head.

No changes in the Portland personnel have been made, aside from Mr. Scott taking over the local presidency, while Mr. Hosfeldt becomes vice-president and general manager.

Addition of a stock of fine paper, representing an investment of \$30,000, is being made this month by the Portland house, which was recently moved into a 75 by 100 four-story building at 40 Front Street.

A Record to Equal

A. L. Neumann, Zellerbach Paper Company, Los Angeles division, was in San Francisco recently on his way to Yellowstone National Park and the Pacific Northwest. This month Mr. Neumann celebrates his forty-third year with the Zellerbach Paper Company, 26 of which were spent in the San Francisco office and 17 years in the Los Angeles division. Mr. Neumann is the oldest employe of the company, and has two sons, Bert, who has been with the San Francisco office 24 years, and George, who is in the Oakland division of the company.



To Counteract Contaminated Water— To Offset Scarcity of Good Water

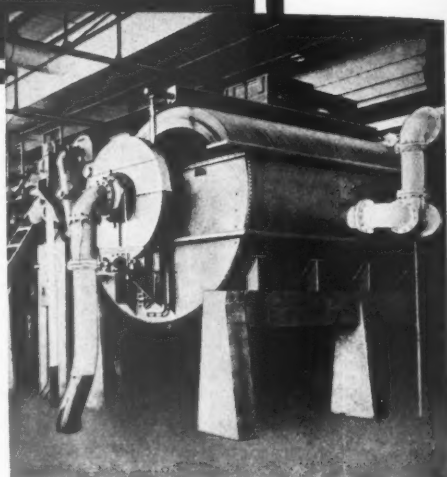
IS your mill one of those faced with higher costs or possibly shut-downs because of contaminated water or seasonally scarce good water?

Take a tip from many of the mills equipped with Oliver United Save-Alls.

The filtrate from their units is so clean that it is returned to the system, being used over and over again. More than 90% of all solid matter is removed.

Thus, once contaminated water has been rectified, little fresh water is needed to maintain the volume desired. Or when good water is scarce, a closed circuit of clean water can be maintained.

Eliminating water troubles takes its place along side of fibre and filler recovery as a tangible benefit gained by using Oliver United Save-Alls.



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New Kraft vs. Waste Paper

Kraft paper and board mills are facing a new element of competition in the present period of big production and lowering prices. Use of kraft paper has expanded to such an extent that great quantities of it are returning thru the channels of the waste paper dealers to board mills making solid and corrugated fibre container stock.

The waste paper situation varies, of course, with locality, but in general there is an over-supply of the commodity and not a few places is waste paper found going into the furnaces, so unprofitable is its baling, sale and collection. It is simply a problem of disposal. In New York City, for example, such a crisis of over-supply of waste and under-supply of storage space has developed that waste paper dealers get paid for taking the waste paper away. The tremendous population crowded into a small area, together with the huge consumption of paper involved, creates the situation. The waste has to be moved.

With particular reference to kraft, the board mills in many cases have found that the waste kraft paper gives them an excellent fibre which can be reclaimed and manufactured into a board which compares in quality with new kraft container board entirely too well to please the kraft mills. The situation has directly affected the Pacific Coast, bringing as it does, a new low-cost board into direct competition, the lower cost serving to enlarge the distributing area where such product can be marketed profitably.

PACIFIC COAST PAPER IMPORTS

	APRIL, 1930				
	Newsprint Dollars	Printing Dollars	Writing & Drawing Dollars	Wrapping Dollars	All Others Dollars
To LOS ANGELES—					
From Norway	27,510	.....	.....	.....	.....
From Sweden	13,505	.....	.....	.....	.....
From Canada	178,387	.....	.....	.....	14
From Europe .....	.....	1,134	649	.....	5,280
From China .....	.....	1,120	.....	.....	113
From Japan .....	.....	.....	23	.....	1,134
To SAN FRANCISCO—					
From Sweden	1,140	.....	.....	.....	.....
From Canada	321,607	.....	.....	.....	.....
From Europe	12	2,566	.....	.....	16,379
From China	174	109	.....	22	1,840
From Japan .....	.....	374	.....	.....	.....
From Poland & Danzig .....	.....	.....	.....	.....	75
TO OREGON—					
From Europe	4,624	.....	6	4	2,155
From Japan .....	.....	.....	.....	.....	3
To WASHINGTON—					
From Canada	310,695	.....	.....	.....	5,560
From Europe .....	.....	596	.....	.....	578
From Japan .....	.....	.....	.....	.....	2,736
Pacific Coast Totals.....	857,654	5,899	678	26	35,859
Total Imports all Paper and Paper Products, April, 1930—\$900,116.					

PACIFIC COAST PULP IMPORTS—APRIL, 1930

	Pulpwood		Mechanically Ground Pulp		Bleached Sulphite		Unbleached Sulphite		Unbleached Sulphate	
	Dollars	Cords	Dollars	Tons	Dollars	Tons	Dollars	Tons	Dollars	Tons
To LOS ANGELES—										
From Norway	9,546	150	.....	.....	.....	.....
To SAN FRANCISCO—										
From Canada	5,418	97	3,349	145
From United Kingdom	733	39	.....	.....
To WASHINGTON—										
From Canada	3,383	109	4,707	90	4,753	97	.....	.....
Pacific Coast Totals.....	3,383	109	14,253	240	10,904	233	3,349	145
Total Imports Pulp Wood and Wood Pulp for April, 1930—\$31,889.										

Paper Base stocks imported into Pacific Coast Customs Districts during April, 1930, were as follows: To Los Angeles from Belgium, \$9,036; from Germany, \$2,011; from China, \$1,883; from Japan, \$27,093. To San Francisco from Austria, \$1,290; from Germany, \$4,893; from China, \$4,450; from Japan, \$48,702; from Australia, \$715. To Oregon from Belgium, \$639. To Washington from Canada, \$4,706.

Canadian Exports of Pulp and Paper
May, 1930

Exports of wood pulp and paper from Canada in May were valued at \$16,725,081, according to a report issued by the Canadian Pulp and Paper Association. Compared with April this was an increase of \$4,525,887 and showed only a small decline from the total for May, 1929.

Wood pulp exports for the month were valued at \$3,288,475 and exports of paper at \$13,436,606, as compared with \$2,631,122 and \$9,568,072 respectively in the previous month.

PULP—	May, 1930		May, 1929	
	Tons	Dollars	Tons	Dollars
Mechanical	15,660	460,905	21,706	563,230
Sulphite Bleached	19,024	1,353,194	20,009	1,527,375
Sulphite Unbleached	18,266	905,509	18,205	896,093
Sulphate	8,297	514,371	11,566	670,715
Screenings	1,577	29,705	4,138	64,590
All other	392	22,791	.....	.....
	63,216	3,288,475	75,624	3,724,003
PAPER—	May, 1930		May, 1929	
	Tons	Dollars	Tons	Dollars
Newsprint	225,251	12,951,471	214,342	12,614,252
Wrapping	1,400	144,186	1,310	138,232
Book (cwt.)	3,019	26,915	3,936	50,776
Writing (cwt.)	315	2,892	38	1,149
All other .....	.....	311,142	.....	320,321
		13,436,606		13,124,730

For the first five months of the current year, the exports of pulp and paper were valued at \$76,644,844 as compared with \$79,911,124 in the corresponding months of 1929, showing a decrease for this year of \$3,266,280.

PULP—	Five Months, 1930		Five Months, 1929	
	Tons	Dollars	Tons	Dollars
Mechanical	78,617	2,313,356	73,257	1,968,427
Sulphite Bleached	116,270	8,604,461	107,495	8,234,923
Sulphite Unbleached	88,654	4,409,971	77,556	3,862,835
Sulphate	44,115	2,551,812	57,739	3,438,015
All other	11,205	235,246	12,889	233,428
	338,861	18,114,846	328,936	17,737,628
PAPER—	Five Months, 1930		Five Months, 1929	
	Tons	Dollars	Tons	Dollars
Newsprint	973,282	56,098,107	990,406	59,563,671
Wrapping	6,396	671,596	6,516	706,556
Book (cwt.)	17,397	162,572	33,603	277,162
Writing (cwt.)	1,068	9,805	3,043	26,436
All other .....	.....	1,587,918	.....	1,599,671
		58,529,998		62,173,496

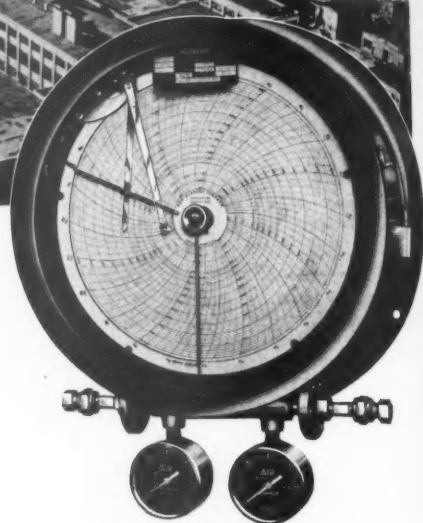
Pulp wood exports for the first five months totalled 510,347 cords, valued at \$4,780,208 as compared with 470,848 cords valued at \$4,315,939 exported in the first five months of 1929.

Building Managers Inspect Camas

Joint guests of the Portland division of the Zellerbach Paper Company and the Crown Willamette Paper Company, 32 managers and superintendents of Portland buildings made a tour of the latter company's 300-ton paper mill and converting plant at Camas, Washington, last month. The Camas mill has now nearly completed a \$4,000,000 program of improvement and modernization.



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"We have a Recorder-Controller the same as Foxboro."

We like to hear that.

It proves that Foxboro sets the Standard for Appearance, Accuracy, Convenience and Performance.

But Foxboro can never be successfully imitated.

Pulp and Paper Companies, from coast to coast, are finding that out. They are taking care to specify Foxboro Automatic Temperature Recorder-Controllers on their Dryer and Calender Rolls, Waxing Machines, Size Vats, Parchment Tanks, Gummed Paper Dryers, Glue Tanks and Cookers, Wall Board Dryers, Rosin Size Preparation Tanks, Drying Rooms and everywhere else that the control of temperature to a specific degree is required.

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Rice Straw Mill Resumes Construction

After some months of inactivity the Pacific Coast Pulp and Paper Corporation shows new life. In a letter to PACIFIC PULP AND PAPER INDUSTRY D. M. Thomson, president of the company, writes from Santa Monica, California, that work was started the week of June 9 at the company's site at Richvale, California.

"The financing program has been so far completed whereby the buildings and installation of the machinery will go right ahead from now on," Mr. Thomson writes.

"My last reports a day or two ago advised that excavating would be completed this week (letter dated June 16) and concrete pouring would be started immediately thereafter. It is anticipated that the buildings will be completed and machinery installed about the end of November or early in December and production should begin before the end of the year. I anticipate that rapid progress will be made towards completion of the plant from now on."

C. A. Kieren is general manager in charge of construction and is now residing at Sacramento.

The company is capitalized at \$500,000 and is incorporated under Delaware laws. It proposes to erect a 35-ton mill to manufacture wrapping, kraft, butcher's manila and fibre papers from straw which is available in quantities in the region. The plant would include a boiler plant, machine room, beater room, digester building and recovery building, all of concrete and steel.

A recently issued prospectus of the company lists the following officers: president, D. M. Thomson, secretary-treasurer of the Suckow Borax Mining Company, Los Angeles; vice-president, Peter Swan, consulting engineer and mill architect, Portland; treasurer, A. J. Lofgren, secretary of the California Rice Growers Association and secretary of the Butte County Rice Growers Association, Richvale; director, H. K. Sears, senior partner of Sears-Porter Realty Company, Chico, California; director, M. A. Murphy, capitalist, formerly with Colton Portland Cement Company and Tropico Clay Products Company, Los Angeles; secretary and counsel, Wesley E. Marten, Sacramento.

Sees Good Future for Coast Pulp and Paper

Steady growth of the pulp and paper industry on the Pacific Coast will keep the industrial wheels turning even tho the production of sawn lumber may suffer with the passing of the virgin forests. Ability of the Pacific Northwest soil and climate to provide a perpetual source of pulp timber insures the continuity of the industry.

This was one of the points brought out by J. J. Donovan of the firm of Bloedel-Donovan Lumber Mills, one of the major operators in logging and lumber manufacturing in Washington and British Columbia in the course of an address before the Port Angeles, Washington, chamber of commerce on June 27.

The main theme of Mr. Donovan's address was a discussion of the Oriental immigration question. Mr. Donovan some months ago spent considerable time in China, Japan and the Far East looking into conditions at first hand. He advocated the removal of the Japanese exclusion act and the placing of Japan on an equal footing with other nations of the world. To do so would give to Japan an immigration quota of only 147 people annually, and would remove the stigma of the exclusion act and serve to establish better trade relations between the United States and Japan. Mr.

Donovan said that perhaps 10,000 Pacific Coast workmen were now idle because of prejudices against American lumber and other products brought about by retention of the Japanese exclusion act.

Mr. Donovan paid a tribute to the progressiveness of Port Angeles and commented particularly how, in the ten months elapsed since his last visit to the city, he had witnessed the transformation of an industrial miracle at the Ennis Creek site, where formerly there was only a ghostly idle building and today there was an operating pulp mill representing a new payroll for the city and an investment of several millions of dollars.

Following the luncheon, Mr. Donovan was the guest of W. H. Swalwell of the Olympic Forest Products Company and made a tour of the company's new pulp mill.

Favors Forest Taxation Revision

Sentiment is growing for radical revision of existing forest taxation laws in all timber-growing regions and particularly in the State of Washington which at present is so inadequately provided with legislation of this type as to make private reforestation next to impossible.

Recently in an address before the Chamber of Commerce at Raymond, Washington, center of the heavily timbered Willapa Harbor region, Arthur S. Cory, president-manager of the Lewis County Savings & Loan Association and a candidate for re-election to the state legislature, advocated a tax reform.

PACIFIC PULP AND PAPER INDUSTRY queried Mr. Cory for his specific views on revision of existing forest tax laws to learn the trend of thought toward this legislation which is so urgently needed to provide a sound future for the growing pulp and paper industry of the Pacific Northwest. Mr. Cory replied in part as follows:

"Relative to taxation on timber and re-forestation, I am thoroughly in accord with the tax amendment which will be voted on this fall by the people. I believe it allows the legislature latitude in the taxation of logged-off lands and those under re-forestation plans. We presume that some kind of a cut-over tax or sales tax on this timber would be necessary.

"I am not at this time advocating any definite rearrangement, but would support, and I believe our county feels the same, measures which after having been carefully worked out by experts connected with the lumber industry and taxing bodies would be fair both to the state and to the owners of the property.

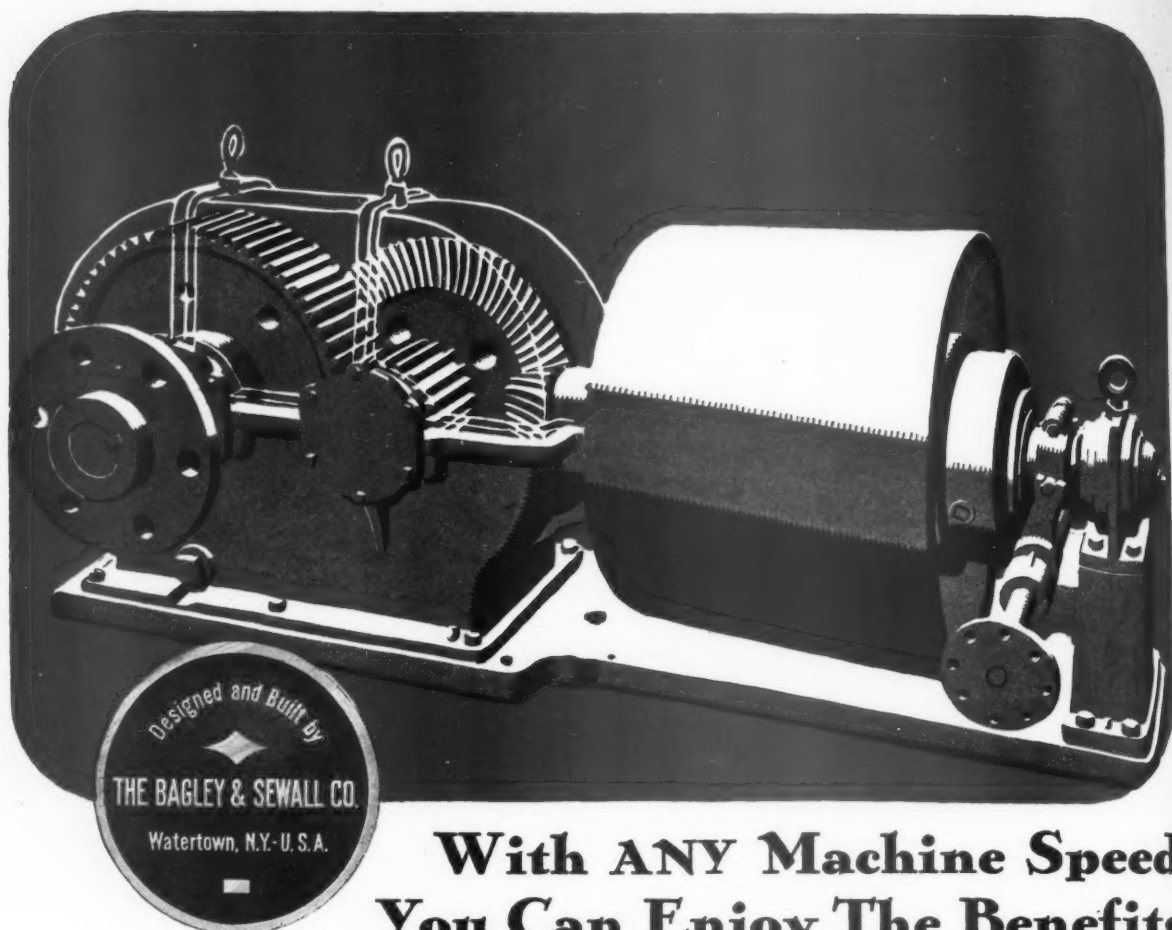
"Under our present constitution it has been practically impossible to aid in reforestation so far as taxation matters are concerned, but do you not think that the new tax amendment will give the legislature the needed authority? Our county has considerable acreage which should be set out to new trees and as this land is now producing practically no revenue, we would not be losing much by direct aid and would gain considerable at the time the timber was grown and cut.

"If reelected to the legislature I shall be glad to give my best endeavor to help get a practical and fair plan regarding this matter brought up for careful consideration."

Crown-Zellerbach Dividend

Directors of Crown Zellerbach Corporation, at a meeting Thursday, June 26, declared the regular quarterly dividend of \$1.50 per share on the Series A Preference Stock and \$1.50 per share on the Series B Preference Stock, both payable September 1 to stockholders of record August 13th.

The directors also declared the regular quarterly dividend of \$1.50 per share on the Crown Zellerbach convertible preferred stock payable September 1 to stock of record August 13.



With ANY Machine Speed You Can Enjoy The Benefits Of These Bagley & Sewall Drives

The unquestioned advantages and conveniences of Bagley & Sewall All Metal Spiral Bevel Gear Drives are not confined solely to high speed machines. Slower machines, too, equipped with these Drives in the Compound Type, profit by the same positive finger tip control, the vibrationless performance, the velvety starting, the space conserving compactness. The Compound Type Drive combines the features of the regular models,—precisely cut all metal gears, Timken bearings, full lubrication, enclosed oil bath, smooth clutches,—with a perfectly functioning reduction device in any desired ratio. Installed quickly, in separate units or complete systems, without interrupting production.

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Pacific Coast Division
Pulp and Paper Section

NATIONAL SAFETY COUNCIL

ROBERT H. SCANLON
Regional Director
Powell River Co., Ltd.
Powell River, B. C.

*The work of SAFETY is just plain good business.
Its benefits are multiplied by widespread interest
in the subject and an interchange of ideas.*

Editor's Note: The following discussion of the SAFETY program undertaken by the Hawley Pulp & Paper Company at Oregon City, Oregon, is contributed to the general cause of SAFETY thru the courtesy of the company's executive vice president, George W. Houk, and R. J. Schadt, chemical engineer, chairman of the Hawley SAFETY committee.

Hawley's Safety Program

MUCH has been said about SAFETY work and its accomplishments. Statistics have shown that an effective campaign in SAFETY results in fewer accidents. SAFETY work, like any other enterprise, must be self-supporting. It must declare a dividend or the time and effort is wasted. The dividend is first and primarily the life, health and happiness of the worker, and secondly, the benefits derived by the employer from the part that the employees are in a better physical and mental state of being.

The Hawley SAFETY organization has been active for about one year and we are beginning to show some results in the way of reducing accidents. The organization has not reached a state of perfection and perhaps will never be an absolutely perfect organization, but we are making progress.

Since this page in the PACIFIC PULP AND PAPER INDUSTRY is to be devoted to an exchange of ideas on SAFETY, the following plan is one mill's way of carrying on its SAFETY program.

First, SAFETY meetings are held twice a month for one-half hour to one hour, but never longer. All heads of departments are permanent members of the SAFETY Committee. Each department head appoints two members from the ranks who serve for a period of three months, at the end of three months two more members are appointed to replace the retiring members. The plant has a SAFETY millwright, who takes care of the making of all SAFETY appliances and guards. He is also a permanent member of the committee. All meetings are held on company time, so there is no

reason outside of pressing work, that should prevent the members from attending.

The work handled by the committee covers the discussion of accidents that have happened during the past two weeks. It is determined whether the accident was caused by a hazardous condition or to the carelessness of the worker. If caused by a hazardous

TWO MORE SIGNED UP FOR SAFETY

The Pulp and Paper Section of the National Safety Council reports the following two new members:

Puget Sound Pulp & Timber Co.
Everett, Washington
Neil Sexton, Treasurer

Shaffer Box Company
Tacoma, Washington
A. W. Berggren, vice-president

condition, the best method of guarding is discussed and the decision is written down in the minutes of the meeting.

Other matters of accident prevention are discussed and included in the minutes of the meeting. All members of the committee receive a copy of the minutes as well as the general manager and the State Industrial Accident Commission.

As soon as the work suggested has been completed it is carried in the "work done" column in the minutes. By this method the SAFETY Committee is assured of all SAFETY work being finished. This has been found to be an effective way of arousing safety interest,

(Turn to page 61)

STATEMENT OF ACCIDENT EXPERIENCE—MAY, 1930

Mills in State of Washington

COMPANY—	Hours Worked	Total Accidents	Frequency Rate	Days Lost	Severity Rate	Standing
Inland Empire Paper Co.....	64,890	1	15.4	13	.200	1
Columbia River Paper Co.....	54,178	1	18.5	6	.111	2
Everett Pulp & Paper Co.....	85,428	2	23.4	32	.375	3
Union Bag & Paper Power Corp.....	67,950	2	29.4	39	.574	4
Grays Harbor Pulp & Paper Co.....	82,729	3	36.2	74	.894	5
Puget Sound Pulp & Timber Co., Fidalgo Division.....	27,336	1	36.6	43	1.573	6
Crown Willamette Paper Co., Camas.....	491,598	19	38.6	385	.783	7
Washington Pulp & Paper Corp.....	99,205	4	40.3	58	.585	8
Fibreboard Products Inc., Sumner.....	21,679	1	46.1	20	.923	9
Longview Fibre Co.....	98,272	5	50.9	24	.244	10
National Paper Products Co.....	90,505	5	55.3	24	.265	11
Fibreboard Products Inc., Port Angeles.....	42,904	3	69.9	45	1.049	12
Rainier Pulp & Paper Co.....	66,676	5	74.9	44	.660	13
Puget Sound Pulp & Timber Co., San Juan Division.....	29,912	6	200.6	526	17.585	14
Shaffer Box Co.....	5,134	2	389.5	43	8.375	15

The following mills not reporting: Pacific Coast Paper Mills, Pacific Straw Paper & Board Co. Not in operation—Tumwater Paper Mills, Cascade Paper Co.



Here's the big Skagit layout at Lyman, Washington

And here's the Mayor and his Model T. Mr. Kirby smokes "Old Briar" in a pipe—and takes a discreet bite of "Star" plug occasionally

And this is how we met the Mayor!

You go up to Sedro-Woolley, then on up to Lyman, Washington, where the Skagit Mill Company is located.

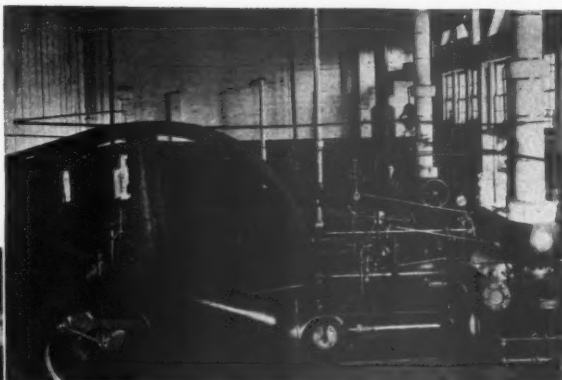
They do big things up here. Big timber is the "theme song" at Skagit Mill.

The president is Wyman M. Kirby. Not satisfied with being head of a real lumber outfit, Mr. Kirby has been Mayor of Sedro-Woolley for six years. He's sheik of Nile Temple, A.O.M.S.; he was once a city councilman and has seen his town multiply its population by ten in his forty years there.

President-Mayor-Sheik Kirby is sixty-five and drives a Model T Coupe, a little younger. *And we completely forgot to ask him if he used Shell Gasoline and Motor Oil in it!* Probably he does, because it runs as smoothly as the big mill, which of course uses Shell Mill Lubricants.



Active H. A. La Plant, treasurer of Skagit Mill Co., finds little time to sit down but we persuaded him to pose with "Toodles," his collie. Toodles is not for sale—at any price



This 122 inch log isn't the biggest one Mr. La Plant ever measured, but there's a lot of wood in it just the same. Skagit Mill specializes in big timbers

The Allis-Chalmers 22-26 Twin Corliss power plant

SHELL MILL LUBRICANTS

When writing SHELL OIL Co., please mention PACIFIC PULP AND PAPER INDUSTRY

Safety

(Continued from page 59)

for if a man finds his SAFETY suggestions have been worked upon, he then feels that he is accomplishing something and that his time has not been wasted.

Aside from the SAFETY Committee, the company has established three first-aid stations that are available for service 24 hours a day. We also have a first-aid team that has become quite proficient in artificial respiration and the use of the inhalator.

An effective measure that was just introduced by the committee is to have all department heads handle accidents for their department instead of one individual for the whole plant. This assures an investigation of all accidents at the time the accident occurs, and tends to make a department head feel responsible for the accidents in his department.

Altho the records show that this company does not rank first in the least number of accidents as yet, we at the plant and of the SAFETY Committee feel that the time is not distant when we can talk about no-accident months. It can be done. The National Safety Committee reports out of 1700 plants reporting in 1929, 92 reported no-accident year.

One of the most important steps in SAFETY work is the reduction of labor turnover. The company is minimizing the labor turnover every month, and this will materially reduce the number of accidents, particularly the serious ones.

St. Helens Making Bleached Kraft

Remarking in somewhat humorous vein that the St. Helens Pulp & Paper Company is "going out of the kraft paper business", President and General Manager Max Oberdorfer is showing some samples of new lines recently developed by the organization. One of these grades is known as "Kranila". It is rich cream in color and has a 108% Mullen test. It very closely resembles the grade long known as Manila and will be offered in that market.

Another new grade offered is an envelope stock of light cream color and high finish. Appreciating that the sheet is 100% sulphate pulp the quality offered is an excellent one and one which affords a very good printing surface.

Behind these two new grades is a little history of bleaching. Both grades are of bleached kraft, and while a pure white is not being attempted the lighter colors serve the distinct purpose of elevating the St. Helens kraft out of the mass commodity market.

The well-known and not-to-be-discussed tactics employed by some kraft manufacturers have driven the kraft industry as a whole into depths of despond and out of the tonnage grades. The charge is general that the larger operators have attempted high handed methods of driving everybody else out of the market thru the medium of ruinous prices, and that once having eliminated all the competition, the price will be swung upward once more. Meanwhile it is said, the big boys are covering their losses in kraft paper manufacture by profits in other departments.

A. J. Lewthwaite Makes Trip South

A. J. Lewthwaite, director of the Spaulding Pulp & Paper Company, Newberg, Oregon, and a heavy stockholder in a number of pulp and paper mills on the Pacific Coast, was in California during June on business and pleasure.

GROUNDWOOD SUPERINTENDENT

Seeks new connection. Practical experience in construction, machinery installation, maintenance and efficient operation of groundwood pulp mills. Understands modern methods of making all grades of mechanical pulp. Capable of organizing department, handling men and taking full responsibility to secure results.

Address reply, Box 103
Pacific Pulp and Paper Industry
71 Columbia Street Seattle, Washington

They Find the REVIEW NUMBER Useful

From far distant and widely separated corners of the earth PACIFIC PULP & PAPER INDUSTRY has received letters from representatives of the Bureau of Foreign and Domestic Commerce of the U. S. Department of Commerce, whence have gone copies of the 1930 REVIEW NUMBER to acquaint the foreign lands with the growing pulp and paper industry of the Pacific Coast as a increasingly important source of supply for pulp and paper products.

From Don C. Bliss, Trade Commissioner stationed at Singapore, Straits Settlements, we have:

This is to acknowledge your letter of April 5th, outlining the growth of the pulp industry on the Pacific Coast and stating that you were forwarding a copy of the 1930 Review Number of the Pacific Pulp & Paper Industry for the use of this office.

The magazine has arrived, and in reviewing it I find that it contains much information which will be helpful to me in acquainting contacts in the paper trade here with the ability of the Pacific Coast pulp mills to supply their basic material needs.

And from far away Montevideo in Uruguay down in lower South America Clarence C. Brooks, American Commercial Attache, sends a word of appreciation as follows:

We have for acknowledgment your letter of April 5, 1930, together with its inclosure, the Review Number of your magazine of March, 1930, issue. We are very pleased to have your magazine on file in our library, where we and local business men may use it as a ready reference to describe the pulp and paper industry of the Pacific Coast.

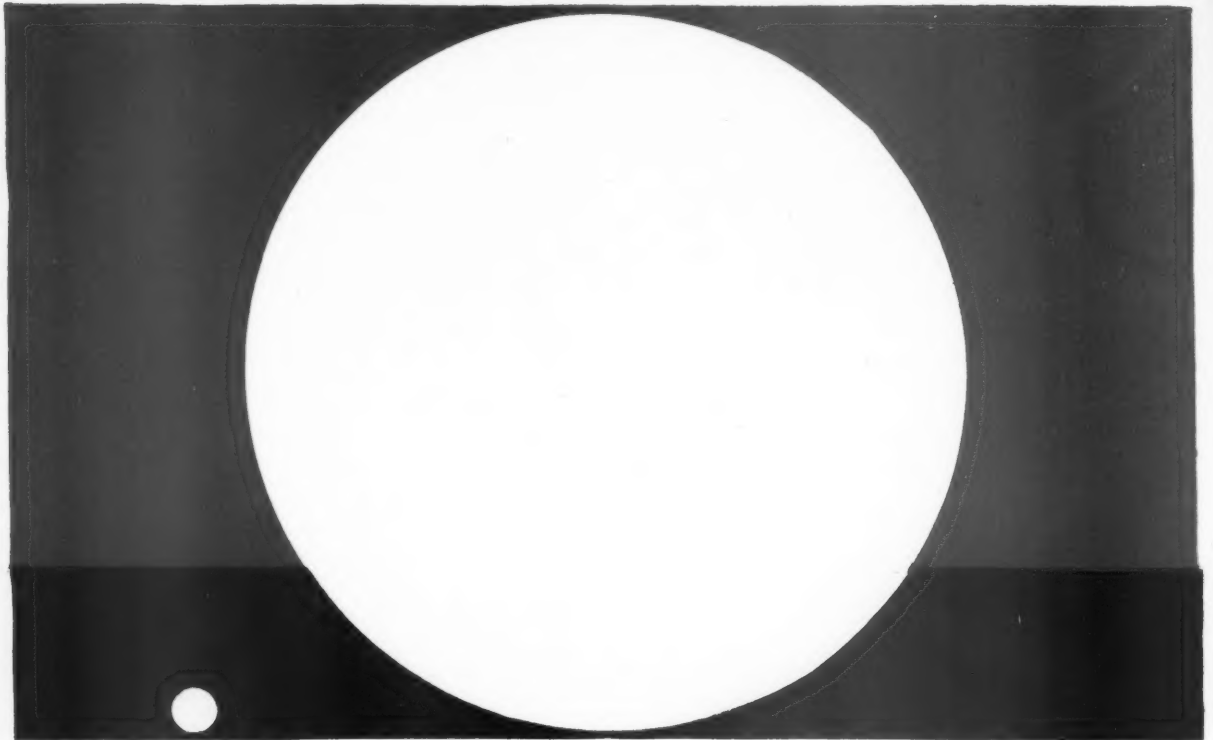
J. Bartlett Richards, American Trade Commissioner at Bombay, India, writes:

"I have the copy of your 1930 REVIEW NUMBER. I am very much interested to learn the extent to which pulp and paper from the Pacific Northwest Coast is exported."

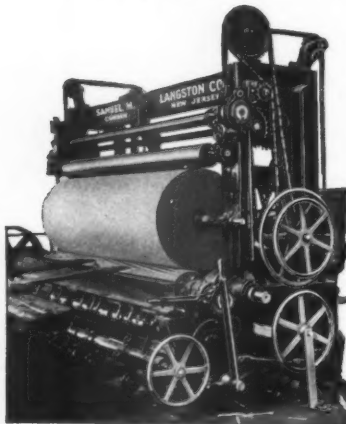
Mr. Richards quotes Indian statistics showing that that country imported in a twelve-month approximately 25,000 tons of woodpulp, most of which came from Norway. Austria, Great Britain, Germany, Sweden and the Netherlands also export to India such grades as news print and other printing paper, wrapping and writing paper.

"Imports of paper from the United States have so far not been considerable and are not noted in the import statistics," Mr. Richards adds. "It is possible, however, that some market might be developed for American book and writing papers altho probably not for news print."

D. W. Carpenter has launched the Wax Paper Products Company at 2225 Southwest Drive, Los Angeles, to produce all grades of waxed paper. Mr. Carpenter is president.

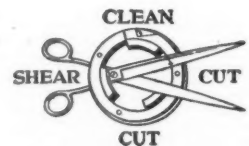


LIKE THE PEBBLE IN THE PRINCESS' BED



'Twas small . . . but though she slept on seventeen mattresses that pebble bothered her. The bearings in your Slitter and Winder may seem unimportant, but, of course, they are vital factors insuring smooth, economical operation and longer life. That's why Langston uses *roller and ball bearings* wherever possible.

SAMUEL M. LANGSTON CO.
Camden, N. J.



LANGSTONS SLITTERS

PACIFIC COAST PAPER EXPORTS—APRIL, 1930

	Newsprint		Printing		Writing		Greaseproof		Wrapping		Tissue	
	Pounds	Dollars	Pounds	Dollars	Pounds	Dollars	Pounds	Dollars	Pounds	Dollars	Pounds	Dollars
From LOS ANGELES—												
To Mexico	300	12	241	27	221	109			28,402	2,272	9,190	1,080
From SAN FRANCISCO—												
To Central America	2,160	21,691	1,000	85	64,573	4,013	1,394	234	122,805	6,129	1,706	237
To China	39,200	1,520			78	32					10,674	1,194
To Philippines	81,129	2,932			598	150	975	615	18,003	1,093	1,345	144
To Other Orient	512	35	48	6	9	3	100	50	8,840	693	856	97
To Japan			650	141	19	29			305	36	180	64
To Norway					40	25						
To Colombia					20,201	1,033						
To Venezuela					810	46						
To Mexico							120	22			2,440	267
To South America									11,918	625		
To Canada											123	43
From OREGON—												
To Australia	5,374	263	61,599	3,190	123,478	6,094			1,821	104		
To Philippines	522,696	19,537			239,649	11,609	38,341	3,432	326,928	11,913		
To Argentina			5,480	285					2,950	160		
To China			53,106	2,841	128,060	6,104						
To Japan					5,866	291			20,758	1,175		
From WASHINGTON—												
To Canada			137,434	9,510	5,363	922	12,110	1,196	46,597	2,008	76,974	1,429
To China			535,965	32,158	3,196	822					54,168	2,942
To Philippines			454	7,902	1,181	152						
To Australia			28,373	1,534								
To Japan					191	83			13,880	2,784		
Pacific Coast Total	651,371	45,990	824,350	57,679	595,482	31,517	53,040	5,459	603,207	28,992	157,658	7,497

	Board		Building		Boxes & Cartons		Paper Bags		Converted Paper & Products		Miscellaneous Paper & Prod.	
	Pounds	Dollars	Pounds	Dollars	Pounds	Dollars	Pounds	Dollars	Pounds	Dollars	Pounds	Dollars
From LOS ANGELES—												
To Mexico			240	12			220	12	889	220	751	
To Argentina			43,186	1,220							1,585	
To China			39,593	886							196	
To Other Orient			37,459	1,266							600	
To Australia			17,803	445							164	
To Canada											51	
To Japan											222	
To Central America												
From SAN FRANCISCO—												
To Mexico							53	7			385	
To China	338,474	10,100	147,800	2,415	6,019	283	150	14	176	35	1,427	
To Other Orient	297,142	6,907	127,850	3,458			39,865	3,403			237	
To Central America	2,669	619					45,134	3,765			15	617
To Australia	139,419	3,654	75,581	2,697	130	5	379	27	2,186	162	11,573	
To Colombia							10,100	1,237			203	
To Japan	103	6	54,500	1,797	15	5			9,233	1,103	405	
To Philippines	17,556	2,534	1,000	80	36,891	1,525			93	40	2,240	
To Argentina			35,000	1,110							20	
To South America			18,000	528							365	
To Canada					139	8			307	49	432	
To Venezuela											18	
To Europe												
From OREGON—												
To Central America							2,505	136			140	
To Colombia							4,806	385				
To South America							11,863	753	15	8		
To China	772,128	15,056					642	37			25	
To Australia	2,250	53									59	
To Argentina											36	
From WASHINGTON—												
To Canada	25,836	985			4,330	505	13,571	1,220	1,829	378	7,180	
To China									716	137	189	
To Japan									742	146	441	
To Philippines									1,891	184		
To Australia											1,500	
Pacific Coast Totals	1,595,577	39,914	594,969	15,914	43,194	2,331	129,288	10,996	18,147	2,477	31,261	
Total All Paper Exports for Month of April, 1930—\$102,893.												
Total All Paper Exports for Month of March, 1930—\$269,256.												
Total All Paper Exports for Four Months, 1930—\$1,331,006.												

The following sulphite wood pulp was shipped during the month of April, 1930: From San Francisco to British India, 33 tons, \$1,394; From Oregon to Japan, 8 tons, \$498; From Washington to Argentina, 1,099 tons, \$49,000; to Colombia 54 tons, \$2,296; to China 89 tons, \$3,690; to Japan 99 tons, \$4,430. Washington shipped 85 tons, \$1,628, of other wood pulp to Canada during the month of April, 1930.

CLASSIFICATIONS—For convenience of presentation, some classifications have been combined, as follows: "printing," includes book (not coated), cover and surface coated paper; "greaseproof" includes water-proof; "tissues" includes crepe, tissue, paper towels, napkins and toilet; "board" includes boxboard, bristol, bristolboard and other paper board and strawboard; "building" includes sheathing, and other building paper; "writing" includes fancy papeteries and other writing; "converted paper products" includes envelopes, cash register rolls, index file and other office

forms; "miscellaneous" includes blotters, paper hangings, vulcanized fibre sheets, strips, rods and tubes, manufactures of vulcanized fibre and other paper products. **COUNTRIES**—Under the classification "Central America" are included all of the Central American countries and Cuba. "South America" includes only the following South American countries: Ecuador, Paraguay, Bolivia, Uruguay, and the Guianas; other South American countries are classified separately. "Orient" includes all the Asiatic countries with the exception of China and Japan, which are separately classified. New Zealand is included under "Australia."

Pacific States Company Appoints Engineer

R. L. Matthews, formerly associated with Gonzaga University at Spokane, has joined the Pacific States Pulp & Paper Company as an engineer, according to an announcement by that company last month. Mr. Matthews will be employed in organization work and

on construction when that phase is undertaken.

The Pacific States Pulp & Paper Company plans the construction of a 100-ton kraft pulp mill on a site near Priest River, Idaho. They also plan the development of a salt cake deposit near Okanogan, Washington.

PULP

PERKINS-GOODWIN CO.
Established 1846
551 FIFTH AVENUE, NEW YORK
TEL. VANDERBILT 2800

PAPER

When writing to PERKINS GOODWIN Co. please mention PACIFIC PULP & PAPER INDUSTRY

Production of News Print

Production in Canada during May 1930, according to The News Print Service Bureau, amounted to 237,681 tons and shipments to 239,034 tons. Production in the United States was 118,093 tons and shipments 114,702 tons, making a total United States and Canadian news print production of 355,774 tons and shipments of 353,736 tons. During May, 25,149 tons of news print were made in Newfoundland and 742 tons in Mexico, so that the total North American production for the month amounted to 381,665 tons.

The Canadian mills produced 16,131 tons less in the first five months of 1930 than in the first five months of 1929, which was a decrease of 1 per cent. The United States output was 6,538 tons or 1 per cent less than for the first five months of 1929. Production in Newfoundland was 14,135 tons or 14 per cent more in the first five months of 1930 than in 1929 and in Mexico 612 tons less, making a total decrease of 9,146 tons.

During May the Canadian mills operated at 75.2 per cent of rated capacity, United States mills at 80.4 per cent and Newfoundland mills at 101.1 per cent. Stock of news print paper at Canadian mills totaled 44,409 tons at the end of May and at United States mills 27,924 tons, making a combined total of 72,333 tons which was equivalent to 4.3 days' average production.

NORTH AMERICAN PRODUCTION

	Canada	United States	Newfoundland	Mexico	Total
1930—May	237,681	118,093	25,149	742	381,665
Five Months	1,070,288	577,840	116,261	7,490	1,771,879
1929—Five Months	1,086,419	584,378	102,126	8,102	1,781,025
1928—Five Months	967,497	599,127	92,830	6,281	1,665,735
1927—Five Months	826,083	645,842	82,046	6,330	1,560,301
1926—Five Months	735,152	701,850	69,304	5,044	1,511,350
1925—Five Months	623,143	634,106	27,850	5,357	1,290,456
1924—Five Months	570,822	636,374	27,074	4,790	1,239,060
1923—Five Months	512,841	626,944	26,356	5,000	1,171,141

For Sale Cheap

SECTIONALIZED ELECTRIC DRIVE FOR CYLINDER MACHINE DRIVE BUILT BY THE WESTINGHOUSE ELECTRIC & MFG. CO.

Drive removed because of shutting down a Cylinder Machine.

Speed Range 50 to 200 feet. Voltage Range 50 to 250 Volts. Consisting of the following:

Motor Generator Set: 1st Baby Dryer Section; 2nd Baby Dryer Section; 1st Press Section; 2nd Press Section; 3rd Press Section.

1st Dryer Section; 2nd Dryer Section.

1st Calender; 2nd Calendar.

Reel.

1st Cutter; 2nd Cutter.

All sections complete with automatic control.

Each motor driving through a Jones Spur Gear Reducer direct connected through flexible couplings.

Additional information will be supplied on request.

RIVERSIDE PAPER CORPORATION
Appleton, Wis.

The Paper and Pulp Industry in April, 1930

According to identical mill reports to the Statistical Department of the American Paper and Pulp Association from members and co-operating organizations, paper production in April showed no change from March, 1930, and a decrease of 7% under April, 1929. The total wood pulp production in April registered a decrease of 3% under March, 1930, and a decrease of 2% under April, 1929.

The April production of newsprint, paperboard, wrapping, bag, writing, tissue, and building papers registered a decrease under April, 1929, output. Hanging paper production showed a substantial increase in production over April, 1929, while uncoated book paper production showed a moderate increase in production over April, 1929.

Newsprint, uncoated book, paperboard, writing, tissue and hanging papers registered increases in inventory at the end of April, 1930, as compared with the end of March, 1930. As compared with April, 1929, inventory, newsprint, wrapping, and bag papers showed decreases. The total stocks on hand for all grades was 5% above March, 1930, and 14% above those of April, 1929.

REPORT OF PAPER OPERATIONS IN IDENTICAL MILLS FOR THE MONTH OF APRIL, 1930

GRADE	Production Tons	Shipments Tons	Stocks on Hand End of Month— Tons
Newsprint	109,967	109,346	24,546
Book (Uncoated)	87,929	80,301	56,992
Paperboard	192,165	189,633	62,357
Wrapping	47,901	48,700	44,978
Bag	14,297	14,303	6,749
Writing, cover, etc.	32,729	30,433	47,706
Tissue	12,850	11,870	9,859
Hanging	5,356	5,331	4,267
Building	6,090	6,383	4,597
Other Grades	23,310	21,533	17,712
Total—All Grades	532,594	517,833	279,863

Identical pulp mill reports for April, 1930, indicated that during April, 1930, 10% more mitscherlich pulp and 3% more bleached sulphite pulp was consumed by the reporting mills than in April, 1929. The total shipments to outside markets of all grades of pulp in April, 1930, were 8% below the total for April, 1929.

Kraft and soda pulps were the only grades that showed decreases in inventory at the end of April as compared with the end of March, 1930. As compared with April, 1929, groundwood and soda pulps registered decreases in inventory.

REPORT OF WOOD PULP OPERATIONS IN IDENTICAL MILLS FOR THE MONTH OF APRIL, 1930

GRADE	Production Tons	Used During Month—Tons	Shipped During Month—Tons	Stocks on Hand End of Month— Tons
Groundwood	104,066	87,015	1,428	80,115
Sulphite News Grade	35,487	32,778	2,064	8,503
Sulphite Bleached	27,067	25,479	1,364	5,442
Sulphite Easy Bleaching	3,268	2,688	275	1,049
Sulphite Mitscherlich	7,777	6,587	1,141	1,069
Kraft Pulp	32,032	26,734	5,444	8,332
Soda Pulp	24,548	16,218	8,435	3,707
Pulp—Other Grades	55	—	76	11
Total—All Grades	234,300	197,499	20,227	106,228



The New Williams Sheet Dryer

Dries Hand Sheets Same as Paper on Big Paper Machine



FEATURES—

1. *Electric Heat, Thermostat Control.*
2. *Sheet clamped under dryer canvas.*
3. *Drys sheet flat in 4 - 5 minutes.*
4. *Heavy polished copper top.*
5. *Large drying surface, 20x20 inches. Four 8x8-inch sheets may be dried at a time.*

WILLIAMS APPARATUS COMPANY

WATERTOWN, N. Y.



When writing to WILLIAMS APPARATUS CO. please mention PACIFIC PULP AND PAPER INDUSTRY

Fire at Sitka Spruce Plant

Fire, believed to have had its origin in sparks from the company's smokestacks, set fire to the timber construction of the acid plant of the Sitka Spruce Pulp & Paper Company's 50-ton sulphite pulp mill at Empire, Oregon, last month and for a time threatened disaster.

Fire departments from both Marshfield and North Bend responded and succeeded in quelling the blaze after it had done about \$1,000 worth of damage. The height of the acid towers and a strong wind considerably handicapped the firemen.

The fire, company officials stated, would not interfere with the operation of the plant. No damage was done to any other part of the mill.

International Paper Company's Big New Offices

International Paper Company has moved its general offices from 100 East 42nd Street, to the recently completed Daily News Building at 220 East 42nd Street, where it has taken the upper fourteen floors. Into this space have been concentrated the main offices of its Continental Paper and Bag Corporation, Ticonderoga Pulp & Paper Company, Veldown Company, and various other subsidiary organizations.

Revising Water System

The Pacific Coast Paper Mills, Bellingham, Washington, manufacturers of bathroom tissues and toweling are arranging with the city of Bellingham to use an increased amount of city water. The move does not contemplate any plant expansion.

Sulphite Superintendent, 40 years of age, twenty years' experience in the manufacturing of high grade sulphite, sixteen years with present employers. Wishes mill connection on West Coast.

Address Reply: Box 101
PACIFIC PULP & PAPER INDUSTRY
71 Columbia St., Seattle, Wash.

The HOTEL CONGRESS

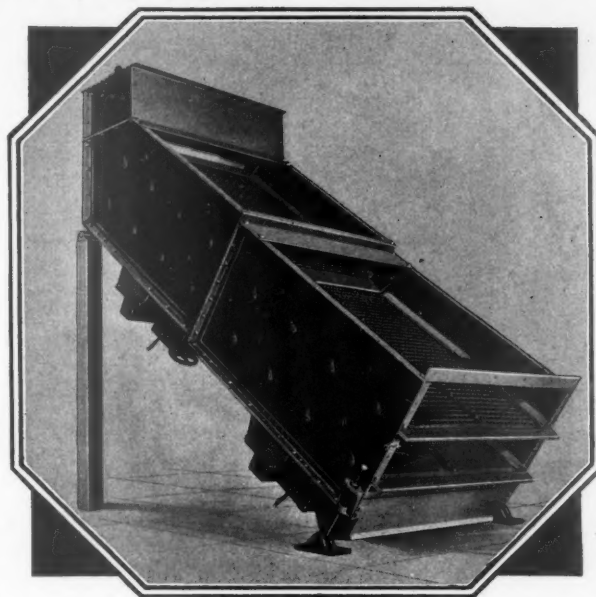
The stopping place in Portland for Pulp and Paper Men.



Sixth at Main
Street
PORTLAND
OREGON

200 Rooms—200 Baths
Convenient Downtown
Location.
Reasonable Rates Prevail.

LOUIS E. BOGEL, Resident Manager



Hum-mer Electric CHIP SCREEN

Immense capacity!
Thorough removal of sawdust
and fine particles!
Small floor space required!
Low power consumption!
Fully adjustable screening angle
and vibration!
No lubrication!
No destructive shaking of supports
or buildings!
No belts or pulleys!
Trouble-free operation!

These are the features which make the Wood Chip Hum-mer a profitable investment for pulp and paper mills!

Write for Catalogue 54-P

The W. S. Tyler Company
Cleveland, Ohio

TYLER
FOURDRINIER
CYLINDER
CORDUROY
WIRES

Wood Pulp Imported by Japan

	April, 1930	Chemical Pulp Pounds	Mechanical Pulp Pounds
England			
U. S. A.		1,452,000	
Germany		500,000	
Sweden		159,600	
Norway		2,871,467	
Canada		10,021,600	Nil
France			
Denmark		90,800	
Sundries		114,133	

Total 15,210,000

Total April Imports—15,210,000 Pounds.

Total March Imports—14,204,000 Pounds.

Business conditions are very much depressed and prospects for an upturn are not bright. Prices on unbleached sulphite declined 5% during the past month. The Fuji Paper Company, one of the larger Japanese mills, is planning to shut down its Kyoto mill in July.

In Reward For Rapid Construction Work

President Ossian Anderson of the Puget Sound Pulp & Timber Company last month was host for some 20 officials of the company and the construction engineers in honor of E. C. Cornell, one of the members of the contracting firm which built the new pulp mill, at a week-end party held at Big Four Inn, in the mountain country back of Everett, Washington.

Salem Paper Mill Seeks Street Vacation

The Oregon Pulp & Paper Company, operating a 120-ton bleached sulphite specialty paper mill at Salem, Oregon, has met opposition in its efforts to secure the vacation of a street adjoining its mill. The com-

pany previously announced that it was ready to construct a new warehouse on the property provided the vacation order went thru.

Following the introduction of an ordinance an opposition group developed protesting the gift of the land to the mill. The resolution was subsequently withdrawn, but a substitute was expected to be presented. The Salem mill is one of the F. W. Leadbetter mills. Its chief products are glassine, greaseproof and sulphite bond.

SHIPMENTS OF OVERISSUE NEWSPAPER

From Pacific Coast Customs Districts—April, 1930

	From Los Angeles	Pounds	Dollars
To China		7,762,960	55,593
To Japan		140,000	1,050
To Philippines		535,000	4,008
To Other Orient		144,140	1,224
Total		8,582,100	61,875
	From San Francisco		
To China		2,013,056	12,942
To Japan		336,000	2,219
To Central America		10,500	154
To Other Orient		53,200	486
Total		2,412,756	15,801
	From Oregon		
To China		70,000	5,320
	From Washington		
To Canada		7,450	214
Pacific Coast Total		11,018,306	83,210

Arnett Leaves New Westminster

President J. J. Herb of the Westminster Paper Company, Ltd., New Westminster, B. C., has announced that R. F. Arnett, formerly sales manager, is no longer associated with the company.

SULPHUR *for* SULPHITE

4000 to 5000 Tons
Daily Production

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TEXAS GULF SULPHUR CO.
75 E. 45th Street New York City
Mines: Gulf and Newgulf, Texas

